FLIGHT
The AIRCRAFT ENGINEER & AIRSHIPS

First Aero Weekly in the World.
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DIARY OF FORTHCOMING EVENTS

Club Secretaries and others desirous of announcing the dates of important fixtures are invited to send particulars for inclusion in the following list:

1922.
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Oct. 26 .... Royal Aero Club Dinner at Savoy Hotel, celebrating the Schneider Cup victory and first King's Cup Race
Nov. 30 .... Closing date for FLIGHT Glider Designing Competition
Dec. 15–Jan. 2 Paris Aero Exhibition
1923.
June .... International Air Congress, London
Dec. 1 .... Entries close for French Aero Engine Competition
1924.
Mar. 1 .... French Aero Engine Competition
Mar. 15 .... Entries close for Dutch Height Indicator Competition

EDITORIAL COMMENT.

ANOTHER step in the right direction will have been made when, towards the end of this month, the new air service between London and Manchester is opened by the Daimler Airway. The arrangements in connection with the new service, it is stated, were completed on October 5 by Maj.-Gen. Sir Sefton Brancker, Director of Civil Aviation, and, as already mentioned, it is hoped to start activities in a couple of weeks' time. While England has generally been looked upon as rather unfavourably situated, both in regard to climatic conditions and in being already extremely well provided for in the matter of fast and frequent train services, there are those who hold that with proper ground organisation there should be no great difficulty in running an air service with good regularity between London and towns in the north.

Internal Air Services

The new line to Manchester starts at the very worst time of the year from a meteorological point of view, and thus if the service prove a success all the more credit will be due to those whose foresight and courage in opening the route have made its inauguration an accomplished fact. We understand that it is the intention to use on the new route machines of the D.H.34 type, with 450 h.p. Napier engines, and which carry 10 passengers. These machines are very fast, and as speed will certainly be an important factor over a route already so well served as is the London–Manchester, the choice is probably a wise one.

In our view the chief merit of the new route lies in the fact that it links up parts of the country other than London with the Continent by air. It is probable that the business man in Manchester who wishes to do business in London will still continue, for some time at any rate, to travel by train, and will send his mails and goods by train. The saving in time, when counting—in the time occupied in getting to and from the aerodromes, is not such as to offer any great inducement to use the air; but if a man in Manchester is doing business with Paris, Brussels, Rotterdam, Amsterdam, Cologne, etc., and is able to reduce the time taken to reach any of these cities by two-thirds or so, then, provided the charges made

are not greatly in excess of those made by the railways, he will certainly see the advantage of patronising the air services.

With the new line established—and assuming that as good regularity can be maintained on the London–Manchester section as on the London–Paris—it will be possible for a Manchester business man to leave his office about a quarter-past seven in the morning, be at the aerodrome in time to catch the morning machine from Manchester, which is to leave at eight, arrive in London in time to catch the machine for Paris, Brussels and Cologne, or Rotterdam and Amsterdam, and be in either of these cities that afternoon. In the opposite direction the machine will leave Croydon in the afternoon, after the machines from the Continent have arrived, and similar advantages will be gained.

For goods and mails perhaps even greater benefit will be found to attend the use of the air services, especially for the more distant places, and thus the establishment of the new line will not only be of benefit to Manchester, but also to the existing lines, by including, as it were, that city in their programme. When and if the extension to Hamburg and Berlin comes into operation the benefits will be still greater, and by then we may hope to see other inland British services come into being. In the meantime, the London–Manchester is a line which will provide a good deal of practical experience of inland flying, and should thus be looked upon as a valuable full-scale experiment from the aviation side, while offering great advantages if conditions prove suitable for its continuance or even extension.

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The Shoe Beginning to Pinch

As we have constantly maintained would be the case, and stated repeatedly in these columns during the last couple of years or so, the restrictions placed upon German aviation by the Inter-Allied Commission, and more recently by the Committee of Guarantees, have not had the effect for which they were designed. When Germany found herself unable to design and construct aircraft, except certain "restricted" types, she began to look around among the countries surrounding her for ways and means of getting around the restrictions. In Russia, and in other countries, Germany found no difficulty in making tentative arrangements for the establishment of aircraft factories, nominally to be of the nationality of the country in which the works were to be established, but in reality to be backed by German capital, run by German heads and to construct types designed by German designers. Feelers were sent out to several countries, and in one or two instances we believe that actually new firms have been established in neighbouring countries.

A few months ago the German Government issued the announcement that in the future, when their present restrictions have elapsed, no aircraft which did not conform to the same restrictions as those imposed upon German machines would be allowed to fly across or land in Germany. This was a very clever move, as it placed other countries on the same footing as Germany with regard to flying. Incidentally it results in handicapping the Allies, notably England and France, as much as Germany was handicapped, and now that both France and England wish to run services into or across Germany, the shoe is beginning to pinch, and pinch badly. Apparently France, seeing how the restrictions have failed and finding herself unable to extend her services east across Germany, has decided to propose, at the forthcoming meeting of the International Commission for Air Navigation, the suspension of Article 5 of the Convention, so that nations may be at liberty to negotiate separately with Germany on the matter of establishing airways. Opposition to this proposal is not likely to be put forward by Britain, and it is therefore to be hoped that an arrangement may be arrived at which will place Germany on a more reasonable footing with other countries as regards air navigation. As we have already pointed out on several occasions, the present restrictions have merely proved to be a very bad case of cutting off one's nose to spite one's face.

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London–Constantinople

The possibilities of the "air-taxi" are rapidly becoming recognised. The de Havilland Hire Service has been doing a great deal of work during the last year or so, and what is really the salient feature is that these services are paying—without a subsidy. Flights are undertaken at a moment's notice to anywhere, and as a particularly illuminating example—whatever the final result—may be mentioned that of hiring an "air-taxi" from London to Constantinople by the Government for an official who had to be in Constantinople in the shortest possible time. The machine, the D.H.37, Rolls-Royce engine, belonging to Mr. A. S. Butler, was piloted by Mr. Cobham, who has already done a very great deal of taxi work both in Europe and Northern Africa. With a speed of round about 130 m.p.h., and the question of cost being of secondary importance, the aeroplane has no rival over such long distances, and was chosen just as a matter of course.

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The Gliding Competition

On Monday of next week, October 16, the gliding competition for the *Daily Mail* Prize of £1,000 will commence at Itford Hill, Sussex. We regard the event as one of considerable importance, inasmuch as the sport of gliding has caught, to a surprising extent, the public imagination, and literally everybody is at present talking gliding. From interest in gliding to interest in aviation in general is but a short step, and therefore the fostering of the sport of gliding and soaring will necessarily result in—quite apart from the establishment of a very fine sport—a general and widespread interest in flying generally.

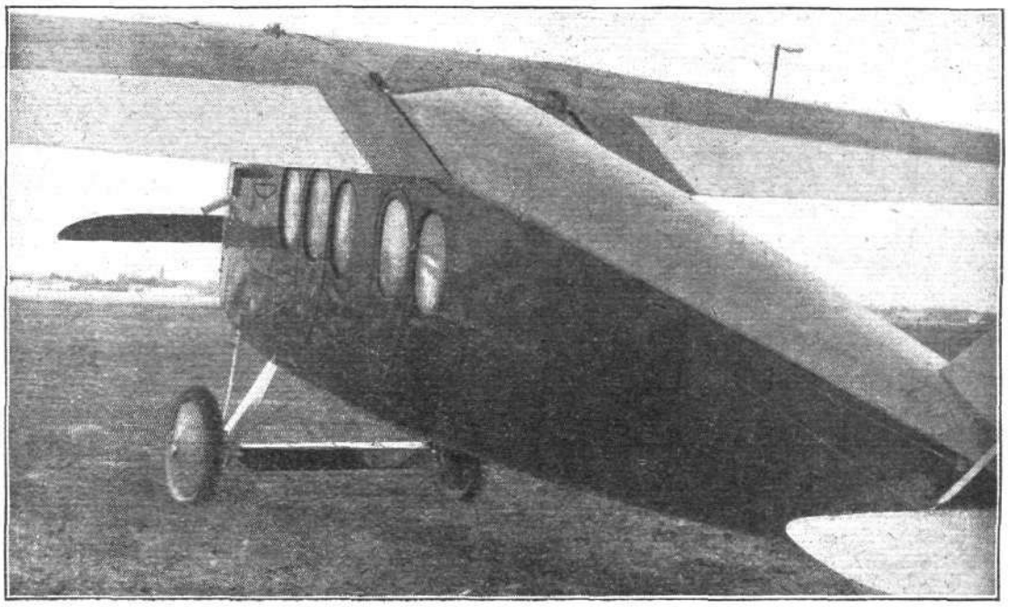
Concerning the competition itself we publish particulars elsewhere, and we shall not, therefore, go into details here, except to point out that it might have been advisable to have devoted one of the £50 subsidiary prizes to some performance other than duration. For instance, one prize might, we think, have been profitably offered for distance covered. The main competition is already devoted to duration by demanding that the machine return to within a circle of 800 yards of the starting-point, and we think that variety might have been lent to the proceedings by devoting one of the minor prizes to some other object. However, that is but a small matter, and we congratulate the *Daily Mail* and the Royal Aero Club on having, in such a short time, secured such a considerable and representative number of entries for the competition. If the competition is repeated next year there will be time enough to devise different rules, and to subdivide the prizes as is done in Germany.

FLIGHT
AIRCRAFT ENGINEER & AIRSHIPS

THE ALBATROS COMMERCIAL MONOPLANE, TYPE L.57

275 H.P. Rolls-Royce "Falcon" Engine

IN our issue of December 9, 1920, we published scale drawings and a brief description of a new monoplane which had then just been designed by the engineers of the German Albatros Company of Berlin. The machine was a cantilever monoplane, known as the L.57, designed to carry six passengers. At the time it was intended to market the new machine with three different power plants—160 h.p. Mercédès, 185 h.p. B.M.W., or 200 h.p. Benz. Owing to the restrictions placed by the Allies on German aircraft construction, the machine was not built for some considerable time, and it was not, in fact, until quite recently—towards the end of September of this year—that the first machine was finished. We have been fortunate enough to secure what we believe to be the first photographs to be published of this new German commercial aeroplane, which, with the accompanying description, should be of interest to British readers.



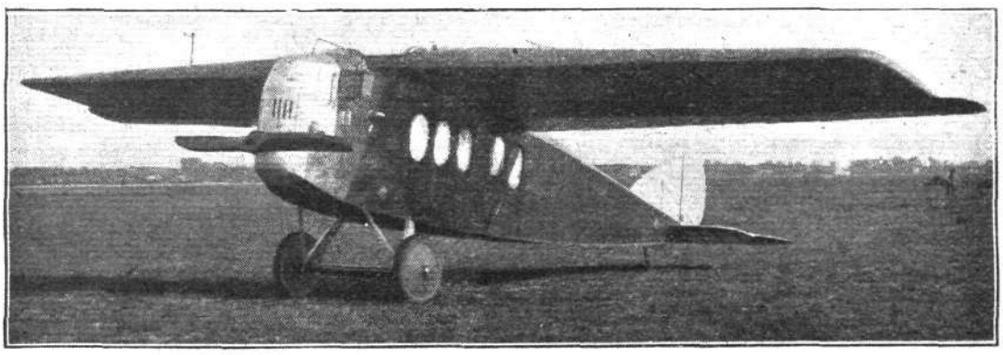
THE ALBATROS L.57 : Note how fuselage deck fairing is carried into the curve of the wing.

An examination of the accompanying photographs shows that various minor alterations have been made to the Albatros since the general arrangement drawings were first published in FLIGHT in 1920. In the main, however, the L.57 remains as originally designed, with the important exception that a Rolls-Royce "Falcon" engine has been fitted in place of one of the three German types originally contemplated.

As regards the changes in the machine itself, these are mainly: Fin and rudder of different shape, and the centre of thrust raised considerably, sweeping the lower *longerons* upwards more, and a smaller downward curve of the top of the engine cowling. As originally designed, the lower rails of the *fuselage* were nearly straight, the upper rails sweeping down at both ends and giving the machine a "hunch-backed" appearance. As actually built, the *fuselage* is more nearly symmetrical in side view, and the centre of thrust considerably higher.

Constructionally, the Albatros L.57 follows more or less on the lines of pre-War machines made by this firm. That is to say, the *fuselage* is covered with three-ply, as were those of the earlier machines, one of which was demonstrated in this country by Herr Thelen, the famous Albatros pilot, shortly before the outbreak of war. In the new machine, however, this form of covering has been extended to include the monoplane wing, the greater portion of which is covered with three-ply. Only the portion from the rear spar to the trailing edge is covered with fabric. The wing is attached to the top rails of the *fuselage* by six large bolts, and can therefore be quickly dismantled for transport.

A cabin with seating accommodation for six passengers is provided immediately underneath the wing, and two doors in each side give access to the passenger compartment. Above the cabin, in the central portion of the wing (which at this point is about 2 ft. deep), is a luggage compartment, while a short distance out from the *fuselage*, also inside the wing, are the petrol tanks from which the fuel is supplied to the engine by gravity feed.



THE ALBATROS, TYPE L.57 MONOPLANE, ROLLS-ROYCE "FALCON" ENGINE : Three-quarter front view.

The pilot's cockpit is placed high in the *fuselage*, immediately in front of the leading edge of the wing, and partly above the engine. The pilot's seat is on the port side, while on the starboard is a seat for a spare pilot, navigator or engineer.

The main characteristics of the Albatros L.57 are as follows: Length o.a., 34 ft. Span, 46 ft. 6 ins. Area, 375 sq. ft. Weight, empty, 2,600 lbs. Useful load, 1,940 lbs. Total loaded weight, 4,540 lbs. Wing loading, 12.1 lbs./sq. ft. Power loading, 16.5 lbs./h.p. Duration, 3½–4 hrs. Climb to 6,500 ft. in 25 mins. Speed, 96 m.p.h.

The Royal Aero Club of the United Kingdom

OFFICIAL NOTICES TO MEMBERS

GLIDING COMPETITION.

THE Gliding Competition which is being organised by the Royal Aero Club, for the prize of £1,000 offered by the Proprietors of the *Daily Mail*, will take place at Itford Hill, near Lewes, from October 16-21, 1922.

Members wishing to witness the Competition may obtain permits on application to the Club.

Subsidiary Prizes

£50 (presented by Lieut.-Col. Alec Ogilvie, C.B.E.) to be awarded to the British Competitor who remains the longest time in the air in one flight in accordance with the Regulations on the first day of the Competition, the flight to be of at least one minute's duration.

£50 (presented by the Royal Aero Club) to be awarded to the British Competitor in a British Glider who remains the longest time in the air in one flight, in accordance with the Regulations on any day from October 16-21, 1922, the flight to be of at least five minutes' duration. This prize is only open to British Competitors who do not win either of the prizes presented by the Proprietors of the *Daily Mail* and Col. Ogilvie.

List of Competitors.

Identification No.	Entrant.	Pilot.	Machine.
1	E. T. Prosser ..	E. T. Prosser ..	Bi.
2	Handasyde Aircraft Co. and F. P. Raynham.	F. P. Raynham ..	M.
3	G. W. Cain	G. W. Cain ..	M.
4	De Havilland Aircraft Co.	Capt. H. S. Broad	Br. M.
5	Charles Christopher ..	Charles Christopher	M. Orn.
6	H. E. Waite	H. E. Waite ..	M.
7	J. M. Hargreaves ..	J. M. Hargreaves..	Bi.
8	British Helicopter Co. ..	F. J. W. Purton P. A. Purton	M. Hel.
9	J. J. O'Freddy ..	J. J. O'Freddy ..	S. Bi.
10	C. Frobisher	C. Frobisher ..	M.
11	A. P. Maxfield ..	A. P. Maxfield ..	Bi.
12	H. S. Dixon	H. S. Dixon ..	M. Orn.
13	George England (1922), Ltd.	E. C. Gordon England.	M.
14	A. H. Knott	A. H. Knott ..	M.
15	J. Jeyes	J. Jeyes	Klemperer M.
16	J. H. Robertson ..	J. H. Robertson ..	M.
17	Sq.-Lr. Maurice E. A. Wright, A.F.C., R.A.F. F. T. Courtney Capt. W. H. Sayers ..	Maurice E. A. Wright F. T. Courtney ..	M.
18	Capt. F. W. Merriam, A.F.C.	F. W. Merriam ..	M.
19	A. H. G. Fokker ..	A. H. G. Fokker .. W. G. R. Hinchliffe	2 Bi. 1 M.
20	Lt.-Col. C. O. Smeaton, C.B.	C.O. Smeaton ..	M.
21	W. L. Jennings ..	W. L. Jennings ..	Br. M.
22	L. Peyret	Maneyrolle ..	M.
23	S. H. G. Brown ..	S. H. G. Brown ..	M.
24	Inventions Development Co.	R. M. Balston ..	M.
25	H. R. Singh	H. R. Singh ..	M.
26	Dewoitine Co. ..	G. Barbot ..	M.
27	Capt. R. H. Stocken..	R. H. Stocken ..	M.
28	A. Jackson	A. Jackson ..	M.
29	N. R. Gordon.. ..	N. R. Gordon ..	M. Orn.
30	P. W. Kingwell and Son	G. Collier	Bi.
31	Sq.-Lr. A. Gray, R.A.F. F./O. W. J. Buchanan, R.A.F.	A. Gray ..	M.
32	C. Winchester E. Brynildsen	C. Winchester E. Brynildsen	Bi.
33	E. D. C. Herne ..	E. D. C. Herne ..	M.
34	J. G. Lee	J. G. Lee	Bi.
35	T. P. Hetherington ..	T. P. Hetherington	M.

Bi. = Biplane. M. = Monoplane. Br. M. = Braced Monoplane. M. Orn. = Monoplane Ornithopter. Sail. B. = Sail Biplane. M. Hel. = Monoplane Helicopter.

Officials

Judge.—Lieut.-Col. J. T. C. Moore-Brabazon, M.C., M.P.

Stewards.—Lieut.-Col. M. O. Darby; Lieut.-Col. Alec Ogilvie, C.B.E.; Maj. O. T. Gnosspelius.

Clerk of the Course.—H. T. Wright.

Timekeepers.—Lieut.-Col. W. A. Bristow; Capt. R. J. Goodman Crouch; W. O. Manning.

Marshals.—Capt. L. T. G. Mansell; A. J. A. Wallace Barr; A. R. Dresser; Lieut.-Col. C. S. Risk, D.S.O.; Flight-Lieut. R. Halley.

Press Steward.—Geoffrey Dorman.

Secretary.—Harold E. Perrin.

Assistant Secretary.—B. Stevenson.

CLUB DINNER

The Committee has decided to hold a Dinner at the Savoy Hotel, London, on Thursday, October 26, 1922, to celebrate the British victory of the Supermarine-Napier flying-boat, piloted by Capt. H. C. Biard, in the Jacques Schneider International Seaplane Race at Naples, and the holding of the Circuit of Britain Air Race for the Cup presented by His Majesty the King.

The price of tickets (exclusive of wines, etc.) is £1 1s. each. Members may also obtain tickets for their friends (including ladies) to the extent of the accommodation available.

In order to assist in the arrangements, early application for tickets is requested.

London-Manchester Air Service

THE first British air service which will connect Manchester and London by air is to be opened by the Daimler Airway towards the end of the month.

Maj.-Genl. Sir W. S. Brancker, Director of Civil Aviation, completed arrangements recently whereby the Daimler Airway will run one of their Napier-engined ten-seater expresses between London and Manchester daily in order to connect with the air services from London to the Continent.

The Daimler air expresses will leave the Manchester Aerodrome each week-day at 8 a.m. and, flying to the London Air Station in under two hours, will be in time to connect with the air services to Paris, Brussels, Cologne, Rotterdam, Amsterdam, and—before the end of the year—with Hamburg and Berlin.

From London to Manchester the air express will leave in the afternoon after the aeroplanes from the Continent have arrived at the London Air Station.

This new internal airway will bring Manchester within five hours of Paris and seven hours of Cologne, while in the Spring of 1923 it will be possible to fly from Manchester to Berlin and Copenhagen in the course of a day.

It is understood that the air fare will be only slightly above the first-class railway fare.

James tries the French Speed Course

ON October 3 and 4 Mr. J. H. James attempted to wrest from Sadi Lecointe the honour of being the holder of the world's speed record. At Etampes on October 3 James made three attempts with his Napier-engined Gloucestershire Aircraft Co. Mars I, and on the next day a fourth attempt. During the first attempt the following times were obtained over the measured course of 1 km.: First flight in 11⅜ secs., second in 10⅘ secs., third in 11⅕ secs., and fourth in 10⅘ secs. This corresponds to an average speed of 324.349 km. (201.1 miles). In the second attempt the times were: 11⅖, 10⅗, 11⅗ and 10⅖ respectively. The regularity was remarkable. Average speed, 330.275 km. (204.8 miles) per hour.

In the third attempt the times were: 11, 10·7, 10⅗ and 10·4, corresponding to an average speed of 341.3 km. (211.6 miles) per hour.

On October 4 a fourth attempt was made, the times obtained being: 10⅘, 9⅘, 11⅖ and 10⅕ secs. respectively. This gives an average speed of 341·432 km. (211·7 miles) per hour. Sadi's record stands at 212·6 m.p.h., so that to all intents and purposes the two machines are of the same speed. Both James and Lecointe will probably try again. To establish a new record it is necessary to beat the existing speed by at least 4 km. per hour.

FLIGHT

GLIDING, SOARING AND AIR-SAILING

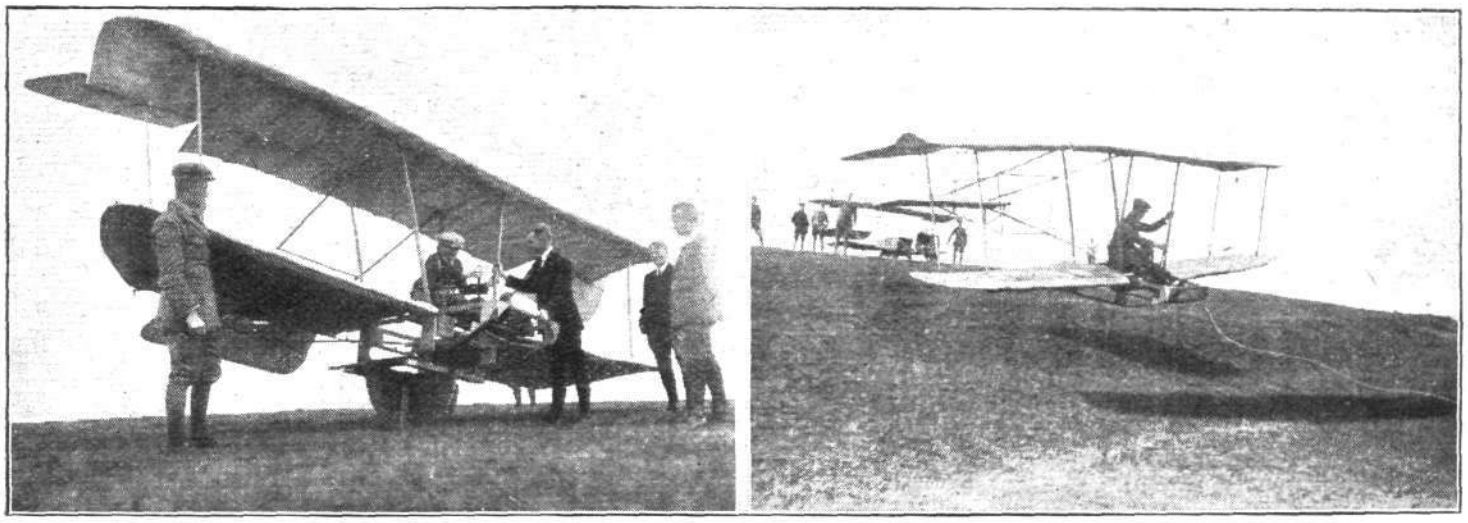
MONDAY of next week (October 16) will see the opening of the gliding competition for the *Daily Mail* Prize of £1,000, and for two subsidiary prizes of £50 each. One of these has been offered by Col. Alec Ogilvie, and will be awarded to the pilot who remains aloft for the longest period on Monday, the duration to be at least one minute. The other £50 prize has been offered by the Royal Aero Club, and will be awarded to the pilot who, on any day of the competition, remains up for the greatest duration (minimum five minutes). This prize will only be awarded to British pilots, and only to those who have not won the main prize of £1,000.

* * *

CONTRARY to expectations, the entries list for the gliding competition is a very large one, no less than 35 machines having been entered at the moment of going to press, with a possibility of two or three more coming along. This is highly gratifying, especially as the time left for constructing gliders has been very short, since the announcement was first made of the intention of the *Daily Mail* to offer its handsome prize of £1,000. What will make the competition even more interesting is the fact that at least three countries will be represented, *i.e.*, Britain, France, and Holland. It had been hoped that Germany would also participate, but the German pilots, notably Martens and Hentzen, have refused, partly by way of a protest against the restrictions placed by the Allies on German aviation, and partly because the expense, in German money, of bringing a glider to this country would be enormous. Also the date of the competition rather clashes with another competition in Germany for the Industrie Preis. However, it is to be hoped that if another competition is held here next year the Germans will be well represented.

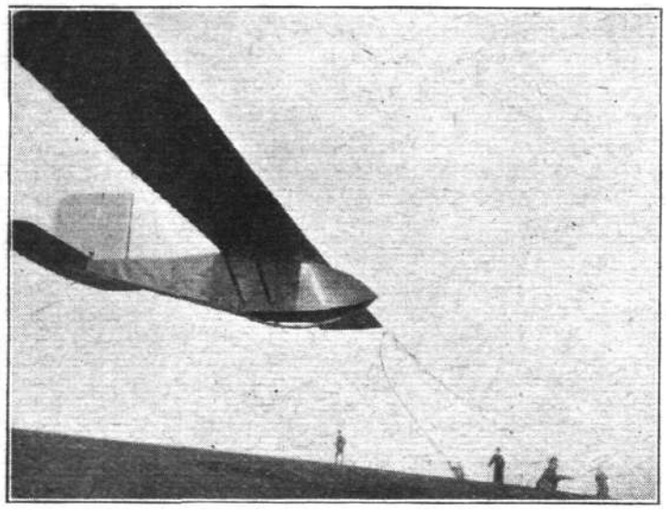
* * *

UNDER the Royal Aero Club notes on page 588 will be found a complete list of the entries received up to Saturday last. As already mentioned, there is a possibility of a few more being entered, but at the moment the list of 35 machines may be regarded as complete. It will be seen that, among what may be termed the orthodox types, the monoplane is in considerable majority. The reason for this is, of course,



TEACHING GLIDER PILOTS TO FLY : At one of the glider flying schools in the Rhön hills pupils are taught to fly by being first mounted on an old glider placed on a pivot formed by two intersecting semicircles which allow the machine to tilt in any direction. The instructor catches hold of some part of the machine and wobbles it about. The pupil then has to make the correct movements with his controls. In the right-hand photograph a pupil is seen making his first free flight on the same glider. The tow rope is just dropping free. The machine has the appearance of having been designed by Mr. Heath Robinson.

BRINGING HER BACK : Our photograph shows one way of bringing back a glider to the top of the hill after a flight. The wings are stacked on a German hay cart, the fuselage being trailed behind. The machine shown is the Aachen "Tail-first" monoplane on which Herr Klemperer crashed after getting into a spin when his glider was dropped from a kite balloon.



THE DARMSTADT MONOPLANE GLIDER "EDITH." In the illustration the machine is just getting away. Note the tow rope dropping from its quick-release in the nose of the fuselage.

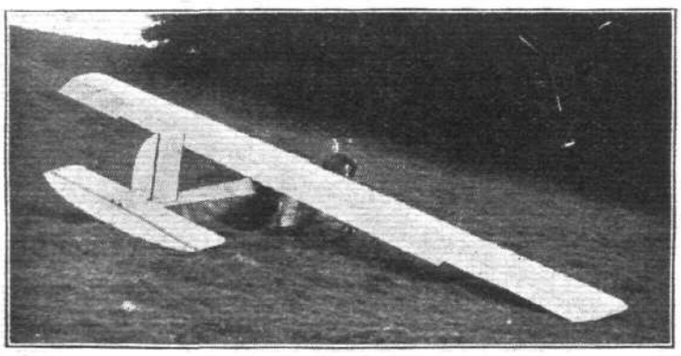
that this type is usually more efficient than the biplane, and as the rate of descent (for any given wing loading) varies as the square of the L/D, it is important to keep this ratio as high as possible. This appears to be most easily done with a monoplane of high aspect ratio and a minimum of bracing.

* * *

A VERY considerable number of unorthodox machines has been entered, including wing-flapping "ornithopters," direct-lift "helicopters," man-propelled aeroplanes, etc. One is, of course, prone to smile at these attempts, but at any rate their inclusion in the competition should assist materially in lending variety to the proceedings, and personally we are looking forward to a most enjoyable week at Itford Hill.

* * *

OF French machines entered one is the Dewoitine on which Barbot has been making excellent flights in France, both during and after the French gliding competition at Combegrasse. This machine is stated to be very efficient, and to have been designed according to the latest ideas in aerodynamics. Its performance will be watched with interest. It may be remembered that M. Dewoitine designed an interesting commercial monoplane for the French firm Aero-Transports Ernoul of Toulouse. The machine did not materialise, but this was, we believe, due to the abandoning of a project for a flying service and not to any defects in the design. The glider entered for the competition is a cantilever monoplane, with thick wing-section (in appearance like the Schoukovsky aerofoil, or Göttingen No. 441). The machine has a wing span of 37 ft., and a wing area of 124 sq. ft. The length over all is about 16 ft., and the weight empty is about 180 lbs. The wing loading in flying trim is, therefore, over 2 lbs. (2¾ approximately), which is somewhat heavy loading for a glider. However, the gliding angle is stated to be excellent, and the lift coefficient corresponding to the high values of L/D may be assumed to be fairly high, so that the rate of descent should not be excessively high. The machine will probably perform best in fairly high winds.



The Darmstadt monoplane, of which scale drawings were published in our issue of September 21, 1921. Herr Bottsch just managed to land the machine before striking the trees, but damaged the fuselage in doing so.

* * *

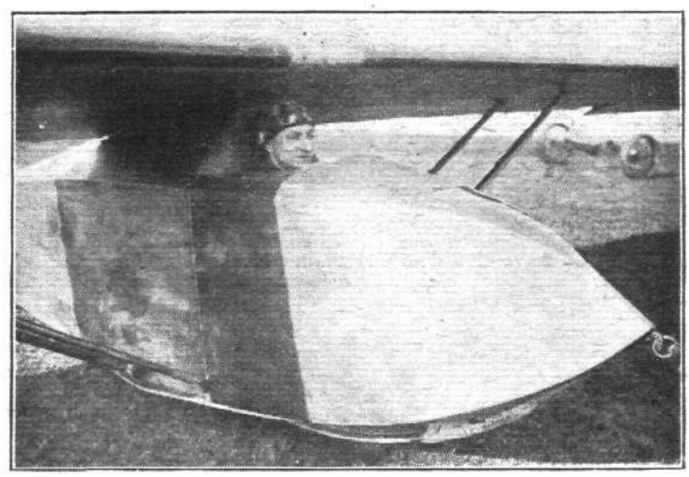
THE Peyret monoplane, to be flown by Maneyrol, also took part in the recent French competition at Puy de Combegrasse. Little information is available concerning this machine, except that it is a monoplane of but 22 ft. span, with a wing area of 156 sq. ft. and weighing only just over 100 lbs. empty.

* * *

HOLLAND will be represented by three machines, all entered by Mijnheer Fokker. Two of them will be biplanes, similar, probably, to the machine on which Fokker flew for 13 minutes with a passenger in the Rhön. What the monoplane will be like is not known at present, but as Fokker is an apostle of the cantilever monoplane it is fairly safe to assume that the third of his machines will be of this type.

* * *

OF the British machines it has only been possible to obtain particulars of a very few in time for this week's issue of FLIGHT. Next week, however, we hope to be able to place before our readers detailed descriptions of a number of the machines actually taking part in the competition (as distinct from those merely entered), and we hope to supplement this information by illustrations.



Herr Bottsch in the cockpit of the Darmstadt machine. Note the quick-release in the nose of the fuselage. This machine has made flights of long duration, one being of 1½ hours.

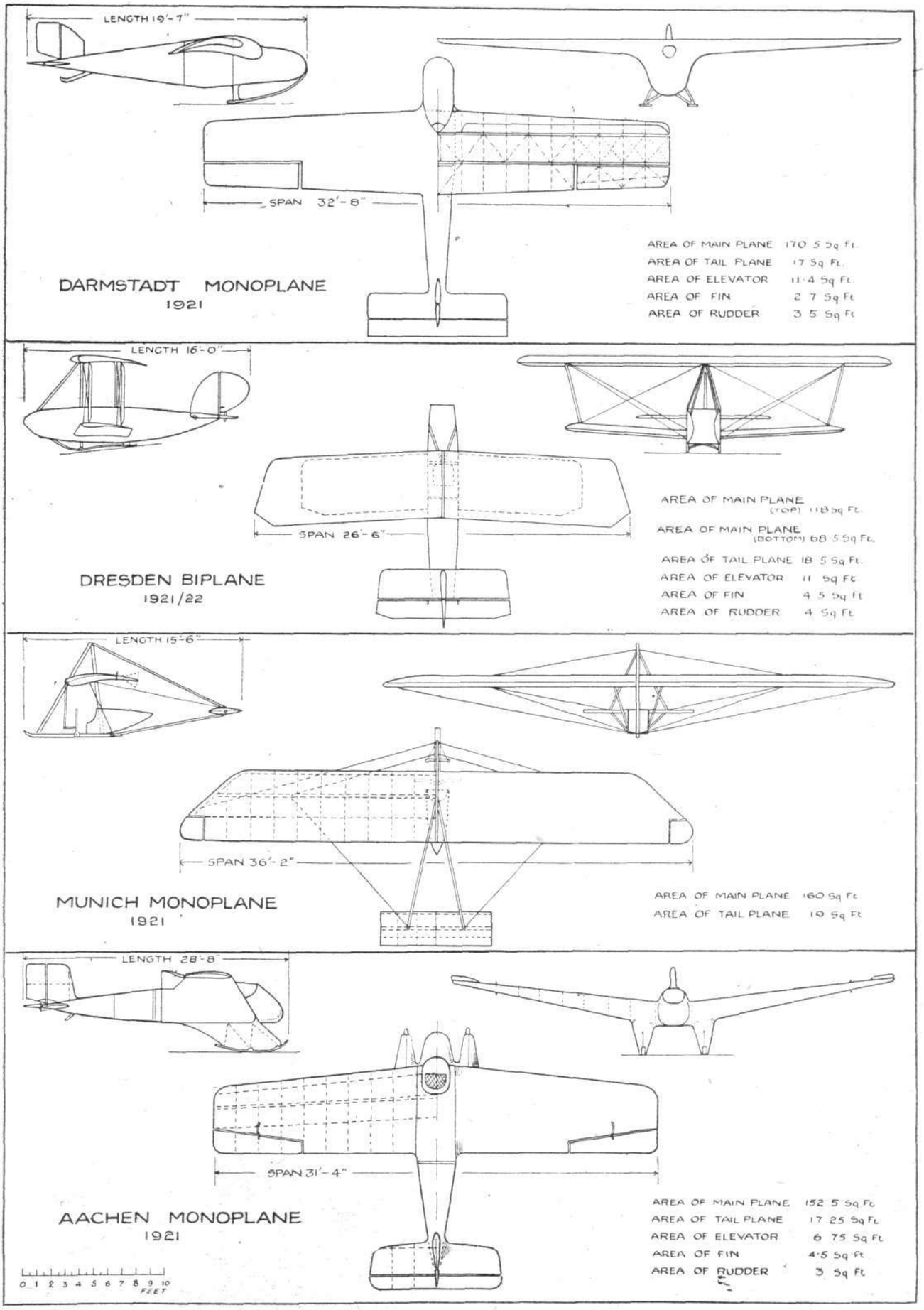
THE machine entered by Capt. Sayers, Mr. Courtney, and Maj. Wright has been constructed at the works of the Central Aircraft Co., Kilburn. We have had the privilege of seeing this machine, and were much impressed both by the design and the workmanship. In outward appearance the machine is very like the famous Hannover "Vampyr," but the construction is quite different, as is also the wing section used. The undercarriage consists of two simple skids, attached to the lower rails of the *fuselage*.

* * *

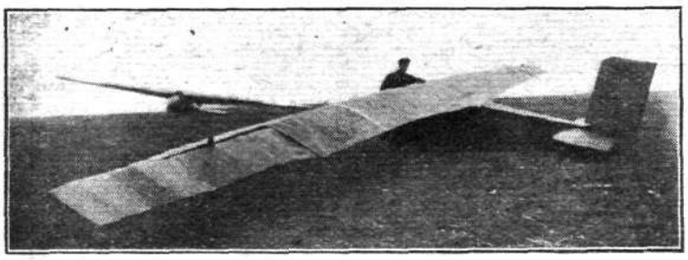
THE machine entered by Capt. F. Warren Merriam is also a monoplane, similar in a general way to the "Vampyr," but differing from that famous machine in many respects. It has been built at the Saunders sheds at Cowes, very kindly placed at the disposal of Merriam and Newman by by Mr. S. E. Saunders, who has repeatedly proved himself willing to assist in any way where the sport of flying is concerned. The monoplane is said to be a very pretty machine, and we are looking forward to its performance in the competition, piloted by our old friend Merriam.

* * *

As one of the earliest designers, and staunchest advocates of the monoplane, Mr. G. H. Handasyde holds a unique position in this country, and the construction and performance of the monoplane glider which he has designed for the competition, and which is to be flown by Mr. Raynham, should therefore be of more than ordinary interest. Mr.



General Arrangement Drawings, to a uniform scale, of four German Gliders, the Darmstadt Monoplane, the Dresden Biplane, and the Munich and Aachen Monoplanes. These machines took part in last year's Rhön competition.



The Espenlaub monoplane, constructed by a carpenter out of all sorts of odds and ends. In spite of its very rough construction the machine flies very well.

Handasyde probably knows as much about the monoplane type of aeroplane as any man living, and he may therefore confidently be expected to have turned out a machine worthy of him. When the whole aeronautical world abandoned the monoplane for the biplane, Mr. Handasyde retained his faith in the former, and for several years continued to turn out some of the prettiest machines ever produced. We shall be disappointed if the glider does not come up to the pre-War Martinsyde monoplanes in graceful appearance and aerodynamic efficiency.

* * *

MR. REX STOCKEN will pilot a machine produced by the Aircraft Disposal Co., but at present no particulars of the machine are available, beyond the fact that the machine will be a monoplane of 45 ft. span.

* * *

CLARENCE WINCHESTER, the "Poet-Aviator," and Mr. Brynildson, both of whom were connected with the Ruffy-Baumann school of flying at Hendon in the early days of the War, have entered a biplane, to be piloted by Mr. Winchester.

* * *

Two de Havilland gliders will be entered, one to be piloted by Capt. Herne and the other by Capt. Broad. The de Havilland glider was described and illustrated in last week's issue of FLIGHT. On Friday and Saturday of last week several test flights were made with the first of these gliders, which was piloted variously by Capt. Broad, Mr. Cobham, and Capt. de Havilland. In spite of the very slight slope of the Stag Lane aerodrome the machine got well into the air and landed at a speed of about 18 m.p.h. At present the glider is fitted with an ordinary Vee undercarriage with wheels, but a different type may be fitted for the competition.

* * *

SCATTERED among the Gliding Notes of this week's issue will be found photographs of several German gliders.

One of our photographs shows the start of the Darmstadt monoplane, scale drawings of which were published in our issue of September 21, 1922. This machine, although being somewhat overshadowed by the Hannover at the Rhön Competition, nevertheless has some very excellent flights to its credit. One of these, for instance, was of 1½ hrs.' duration. The "Edith," as the machine is named, is now regarded as the only serious competitor for the Industrie Preis which the Hannover "Vampyr" has to reckon with. Piloted by Bottsch "Edith" has proved very nearly equal to the famous Hannover machine.

* * *

THE Espenlaub monoplane, built by a carpenter out of odds and ends of materials, proved itself quite a good glider, in spite of its very rough construction and somewhat irregular outline. As a matter of fact, the Espenlaub was of quite good workmanship, but of inferior finish. It is characterised by a very high aspect ratio (17 to 1), which may probably account for its efficiency.

* * *

WE now learn that the machine on which Herr Klemperer crashed, after coming down from a height of 2,000 ft. in a spin (having been dropped from a kite balloon), was of the "tail-first" or "Canard" type. This may explain why Herr Klemperer was unable to get out of the spin. One of the photographs shows the Aachen "Canard" being hauled up to the top of a hill after a flight. It will be noticed that the wings can be dismantled into quite small portions. This is a feature of great practical importance, and we rather fancy that some of the competitors at Itford Hill will have quite a lot of fun getting their gliders back to the top of the hill with the wings in place, especially in a strong wind.

* * *

BY way of contrast, we have thought that scale drawings of some of last year's German gliders may not be without interest. On page 591 will be found general arrangement drawings of four of the 1921 gliders used in the Rhön Competition. The Darmstadt monoplane was, generally speaking, similar to this year's model, but had a rather more carefully streamlined *fuselage* than "Edith."

* * *

THE Dresden biplane was used again this year, and gave fairly good results, although it did not come up to the performances of the Hannover and Darmstadt monoplanes.

* * *

THE Aachen glider flown by Klemperer won the Competition in 1921, but does not appear to have been entered this year, having presumably been supplanted by the "Canard" on which Klemperer crashed. It is mainly remarkable on account of the careful streamlining of the skid undercarriage and the large dihedral angle of its wings.

* * *

OF a much less elaborate, but very light, type is the Munich glider, which was flown by Koller in last year's Competition. Here the pilot is seated below the wing, and is "faired" by a tail piece behind the seat. The monoplane wing is divided in the centre, and is so mounted that its two halves can be tilted independently for lateral control, each wing-half acting as an *aileron*.

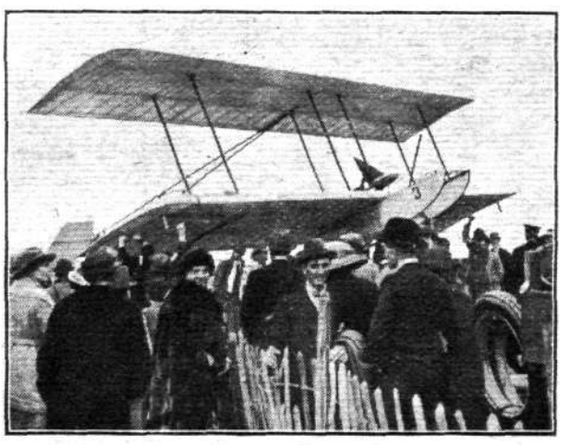
◈ ◈ ◈ ◈

FOKKER'S FIRST FLIGHT IN ENGLAND

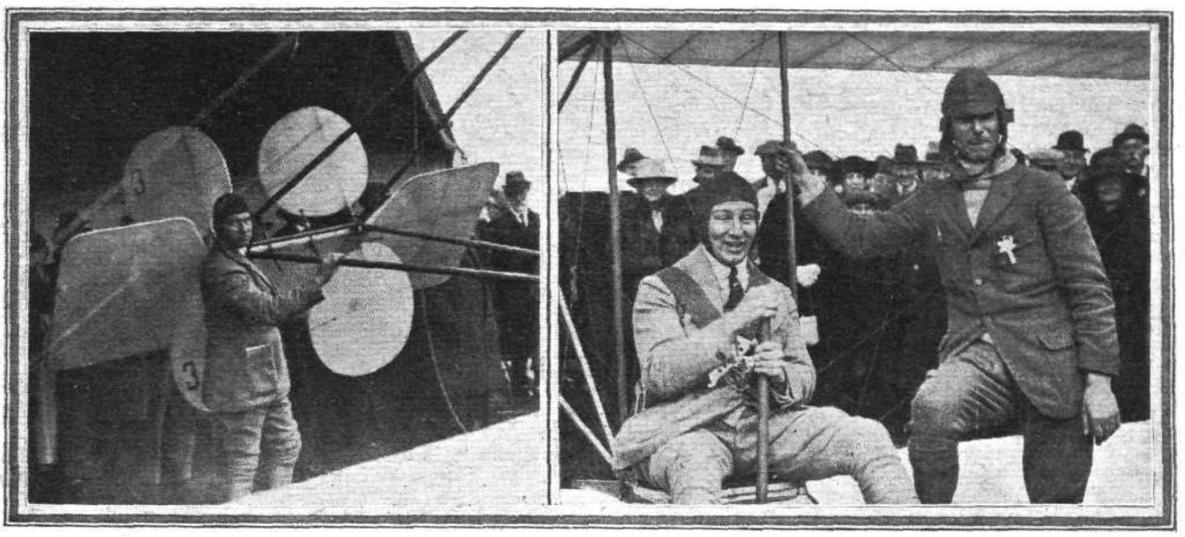
Gliding Demonstration over South Downs

IN connection with the opening of the Peacehaven Hotel, the South Coast Land and Resort Company had arranged, on October 10, for demonstration flights to be made from one of the hills in the South Downs on the Peacehaven Estate, near Newhaven, by Mijnheer Anthony Fokker, the famous Dutch pilot-designer. A number of visitors had availed themselves of the opportunity of witnessing a gliding flight, and many of them were privileged to see a series of kinematograph films which Fokker has taken in Germany and elsewhere of gliders and gliding flights. Wherever he goes Fokker always carries with him a very neat little kine-camera, and in this way he has collected a most interesting series of moving pictures, some of which were shown at the Peacehaven Hotel. Perhaps by way of showing that gliding is not always plain sailing, Fokker showed a glider crash which took place in Germany. The picture showing Hentzen, the famous German record-holder, flying the Hannover, "Vampyr," was viewed with particular interest.

After the "pictures," visitors were entertained to luncheon at the Peacehaven Hotel, and later in the afternoon they proceeded out to the hill on which Mijnheer Fokker had erected his tent-hangar. The weather was not very favourable for gliding, what little wind there was coming from the



Lifting the Fokker Glider over the heads of the crowd before the start of the flight.



Fokker steadying the tail of his glider as it is being lifted out of the hangar. On the right the famous Dutch pilot-designer is seen in the seat of his glider.

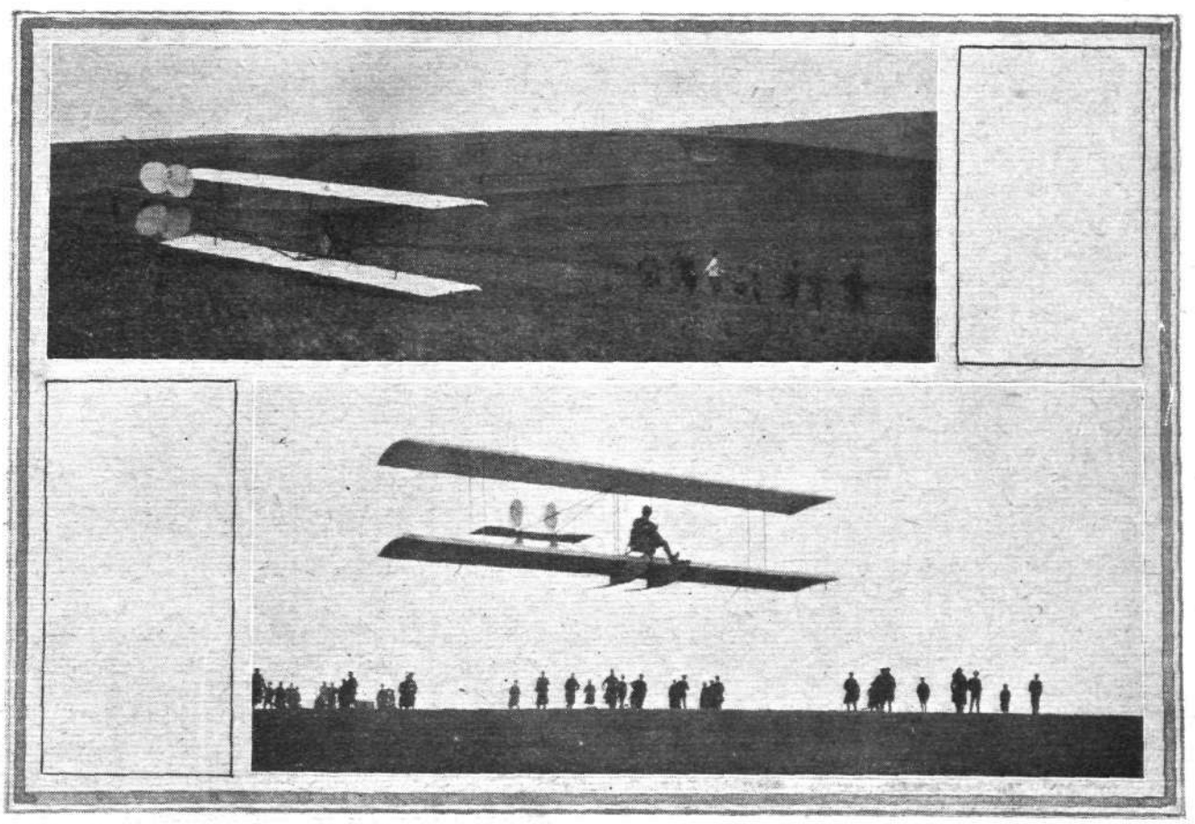
opposite direction to what had been expected, *i.e.*, from north-east instead of from south-west. There was nothing for it but to haul the machine across to the hill opposite. This was accomplished by towing the machine behind a motor-car, the glider sliding alone easily on its steel-shod skids, and Fokker sitting in his seat.

By the time the glider had been transported across to the top of the hill opposite the wind had dropped entirely, and Fokker expected some difficulty in getting the machine off without a head wind to help him. A start was made about four o'clock, twelve men hauling lustily on the towing rope. The speed, however, proved insufficent, and the glider refused to come "unstuck." It was then brought back to the top of the hill, and a motor-car was substituted for the man-power.

After getting up to a speed of about 20 m.p.h. the machine rose, the towing rope was cast off, and the glide commenced.

The machine flew quite slowly, and did not appear to drop very rapidly, in spite of the fact that there was no wind to help it. A perfect landing was made some 500 yards from the starting point, the machine having remained aloft for approximately 45 seconds. The absence of noise made the flight seem quite remarkable, the only sound being a slight swishing as the machine passed overhead.

Among the spectators we noticed Maj.-Genl. Sir Sefton Brancker, Director of Civil Aviation, and Commander Perrin, Secretary of the Royal Aero Club. The Fokker glider is going to the competition at Itford Hill by the end of the week, and will probably be flying again on Monday.



FOKKER'S FIRST FLIGHT IN ENGLAND : The upper photograph shows the first start, which was unsuccessful. For the next start the machine was towed by a motor-car, and the machine got into the air as shown in the lower picture.

LONDON TERMINAL AERODROME

Monday evening, October 9, 1922.

THE first machine on the regular Daimler service to Holland left a few minutes after 9 a.m. today with three passengers and a load of newspapers for Rotterdam. For the present the Daimler Airway will run one machine to Holland in the morning, and this is scheduled to return to London in the afternoon.

The K.L.M. machine has been altered from 10 a.m. to 11.30 a.m., while their machine from Holland will start in the morning, instead of at 2 p.m. as hitherto.

Negotiations and arrangements with the German Government have now reached a point where the extension of the service to Hamburg, at the end of the month, becomes almost a certainty, and it is expected that the service to Berlin should be in running order before the end of the year. On Thursday last it was arranged that the Daimler Airway should run the first internal air service in Britain, and, by the end of the month, they hope to have a regular daily service between London and Manchester.

The object of this service is to connect Manchester direct with the services radiating from the London air station to the continent, and the present intention is to run an early-morning service from Manchester to Croydon in time to catch machines leaving for Holland, Cologne and Paris, while the return service to Manchester will leave London after the machines from the continent have arrived at Croydon. There will of course be some modification of this plan during the winter months, but it is expected that this scheme will work well during the flying season, and will bring Paris within five hours of Manchester.

A New Daimler "Air Express"

OWING to the extension of their services, the Daimler Airway have taken another D.H.34 over from the Air Ministry, which leaves the Ministry with one in hand, and increases the Daimler fleet to four, all D.H.34's with Napier "Lion" engines.

The Instone Air Line are having a rush of passengers between London and Cologne. So great is the demand for seats that on many occasions they have been compelled to put on an extra machine as far as Brussels to cope with the bookings. After a bad start, owing to the fog, at the beginning of the week, the service has settled down and is now running smoothly. In fact, several remarkably rapid journeys of just over 3 hrs., as against the scheduled 4½ hrs., have been made between London and Cologne.

Officials of the Air Ministry have been flying to and from Paris during the week in De Havilland "air-taxis." The other morning General Festing left Paris at 7 a.m., and was at Croydon soon after 9 a.m., while General Brancker and Colonel Blandy have been across during the week. Rumour has it that they are fixing up the details of the experimental night service which is to be run during the winter.

Sound-Ranging Experiments to Begin

THE additional story which has been built on the control tower is now being fitted with the sound-ranging device for which it was designed, and it is hoped to begin experiments with this during the week. The instrument has two square megaphone arrangements which can be revolved in all directions and elevated from the inside of the tower so that their mouths can point in any direction towards a machine in flight.

C.M.A. Air Lines are to have Breguet "Leviathans" on their services. Mr. Grosfils, their London manager, tells me that a number of these machines are already on order, but he does not think they will be in service before the spring of 1924. There has, it appears, been a considerable amount of trouble with the grouping of the four engines round a single propeller, and in the service type of machine two sets of two engines will be installed.

There was some excitement on the aerodrome in the early part of the week when, throughout the whole of one day, the aerodrome was shrouded in mist so that at times it was impossible to see across it. The cone-light was working, and bombs and rockets fired as incoming machines were expected; and, although their engines could be heard droning overhead, they could not be seen. All landed safely, however, and the pilots, when they had descended, being asked if they could see the cone light and "fireworks," caused great surprise by stating that they could see the aerodrome when 10 miles away, although on the ground the visibility was less than 1,000 yards. So that the firework display had been in vain!

THE LONDON-CONTINENTAL SERVICES

FLIGHTS BETWEEN OCTOBER 1 AND OCTOBER 7, INCLUSIVE

Route‡	No. of flights*	No. of passengers	No. of flights carrying: Mails	No. of flights carrying: Goods	No. of journeys completed†	Average flying time (h. m.)	Fastest time made by	Type and (in brackets) Number of each type flying
Croydon–Paris	32	102	12	27	30	2 30	D.H. 34 G-EBBU (2h. 6m.)	B. (4), D.H. 9 (1), D.H. 16 (1), D.H. 34 (3), G. (10), H.P.W.8B (3).
Paris–Croydon	34	128	10	29	33	3 12	D.H. 34 G-EBBU (2h. 20m.)	B. (5), D.H. 9 (1), D.H. 34 (3), G. (11), H.P.W.8B (3).
Croydon–Brussels–Cologne	9§	37	—	—	8	4 53	D.H. 34 G-EBBV (4h. 11m.)	D.H. 4 (1), D.H. 34 (3), Vi. (1).
Cologne–Brussels–Croydon	9‖	46	—	—	9	4 47	D.H. 34 G-EBBV (3h. 20m.)	D.H. 4 (1), D.H. 34 (3), Vi. (1).
Croydon–Rotterdam ...	6	5	6	6	6	2 44	Fokker H-NABS (2h. 4m.)	F. (4).
Rotterdam–Croydon ...	6	3	6	6	6	2 48	Fokker H-NABN (2h. 4m.)	F. (5).
Total for week ...	96	321	34	68	92			

* Not including "private" flights.
† Including certain journeys when stops were made *en route*
‡ Including certain diverted journeys.
§ Four Croydon–Brussels only.
‖ Four Brussels–Croydon only.

Av. = Avro. B. = Breguet. Br. = Bristol. Bt. = B.A.T. D.H.4 = De Havilland 4, D.H.9 (etc.).
F. = Fokker. Fa. = Farman F.50. G. = Goliath Farman. H.P. = Handley Page. M. = Martinsyde. Sp. = Spad.
Vi. = Vickers Vimy. Vu. = Vickers Vulcan. W. = Westland.

The following is a list of firms running services between London and Paris, Brussels, etc. etc.:—Co. des Grandes Expresses Aériennes; Daimler Hire, Ltd.; Handley Page Transport, Ltd.; Instone Air Line; Koninklijkie Luchtvaart Maatschappij; Messageries Aériennes.

Incidental Flying.—Messrs. Perry, Piercey, and Capt. Stocken made numerous test flights on D.H. 9's and Martinsyde F4's at Croydon for the Aircraft Disposal Co., and each took a D.H.9 to Brussels on the 7th.

NOTICES TO AIRMEN

France : Abbeville Aerial Lighthouse

THE aerial lighthouse at Abbeville now exhibits a white group flashing light, the characteristic of which is the letter F of the Morse code, repeated every 10 seconds, thus :— Flash 0.5 sec., eclipse 0.5 sec.—Flash 0.5 sec., eclipse 0.5 sec.—Flash 3.0 secs., eclipse 0.5 sec.—Flash 0.5 sec., eclipse 4.0 secs.

Previous Notice affected.—Para. 2 of Notice to Airmen No. 58 of 1922 is amended accordingly.

(No. 99 of 1922.)

Switzerland : Aerodromes

1. The following information relating to Swiss aerodromes has been received :—

(i) *Dubendorf* (Zurich).—Joint Civil Customs and Military aerodrome.

Position.—Lat. 47° 24′ N., long. 8° 38′ E. Situated approximately 1 km. E.N.E. of the village of Dubendorf and 8 kms. E.N.E. of Zurich.

Dimensions for landing.—1,300 metres N.W. to S.E.; 600 metres N.E. to S.W. Certain portions of the rough ground shown on the plan published with Notice to Airmen No. 3 of 1921 have been levelled.

Landings in an N.E.-S.W. direction should be made in the N.W. portion of the aerodrome or in the extreme southern portion.

Altitude above sea level.—1,450 ft.

Obstructions.—Two W/T masts and aerial, 15 metres (50 ft.) in height in N. corner.

Signals and Markings

Ground Markings.—Concrete letters DUB, 8 metres high, are marked on the ground in the W. corner of the aerodrome, immediately S. of the Customs Office. The letters are read from the West.

A white rectangle, 200 by 100 metres, is marked on the ground in the N.W. portion of the aerodrome.

Signals.—A signal mast is situated in the centre of the row of hangars ranged along the S.W. side of the aerodrome. *The particular attention of pilots is drawn to the following signals which are flown from this mast :—A red and white streamer,* indicating that machines should land or take off towards the S.E. in the immediate vicinity of the white rectangle. *A black-and-white wind sleeve,* indicating that machines should land or take off up wing. *A red-and-white ball,* indicating that school flights are in progress. In order to avoid disturbance of school flights, machines must land or take off in a N.W.-S.E. direction, parallel, and as close as possible, to the row of hangars along the S.W. side of the aerodrome.

Night Markings.—The following night landing arrangements are put into operation only by special request :—

A revolving lighthouse is situated on the large hangar immediately N. of the Customs Office. The lighthouse exhibits a green or red light, revolving with a white horizontal beam. The *green* light indicates that landings *may* take place, and the *red* light that landings are *forbidden.*

All obstructions immediately surrounding the aerodrome, *i.e.*, hangars, W/T masts, etc., are marked by *red* obstruction lights.

A landing L of petrol flares is set out. Machines should land along the long arm towards the short arm; the latter indicates the extremity of the landing area.

Accommodation, etc.—Hangars are available for aircraft of all sizes. Repairs may be executed in the workshops of the Military Air Service. Petrol and oil (all kinds) are available.

Telephone Nos.—Dubendorf 56 and Zurich-Selnau 47.

Customs Regulations.—Previous notification of projected arrival should be given by telephone in order that Customs examination may be arranged.

Landing Hours.—The aerodrome is closed at dusk. Aircraft requiring to land later must give previous intimation.

(*Note.*—The R.F. of 1/12,500 given at the foot of the plan published with N. to A. No. 3 of 1921 is incorrect, the plan actually being reproduced to the scale of 1/15,500.)

(ii) *Sternenfeld* (Basle).—Civil landing ground owned by "Société Aviatik, beider Basel."

Position.—Lat. 47° 33′ N., long. 7° 38′ E. Situated 3 kms. E. of centre of Basle, in the bend of the Rhine, on the south side.

Dimensions for landing.—425 metres E.-W., and 210 metres N.-S.

Altitude above sea level.—260 metres (853 ft.).

Surface.—Flat and grass covered. Care should be exercised. Work is not yet finished, and some parts of the surface are still dangerous. The ground is liable to be flooded during winter.

Obstructions.—Hangar in S.W. corner. Factory with chimneys, 20 metres (65 ft.) high, and high-tension electric cables, 200 metres S. of ground.

Accommodation.—One wooden hangar 22 metres long by 17 metres wide. Door height 4.5 metres, and width 16 metres.

Supplies, etc.—Petrol and oil may be obtained and repairs may be arranged in Basle.

Personnel, etc.—The aerodrome is not permanently occupied.

(iii) *Porrentruy.*—This aerodrome no longer exists.

2. *Previous Notices.*—The text of Notice to Airmen No. 3 of 1921 is cancelled and replaced by para. 1 (i). A revised plan is not being issued at present. Part of para. 2 (Porrentruy) of Notice to Airmen No. 17 of 1920 is cancelled by para. 1 (iii).

3. *Authority.*—"Office Aerien Federal" of Switzerland.

(No. 100 of 1922.)

Wireless Telegraphy Stations in Operation in connection with Civil Air Routes

IT is hereby notified :—

1. With effect from October 1, 1922, the British Meteorological synoptic message issued at 0200 G.M.T. will be transmitted on 4,100 metres C.W. instead of on 1,400 metres C.W.

2. The table in para. 1 of N. to A. No. 45 of 1922 and para. 1 of N. to A. No. 65 of 1922 are amended accordingly.

(No. 105 of 1922.)

Aerodromes for Civil Use : Consolidated List

IT is notified by the Air Ministry that :—

1. Aerodromes, Seaplane Stations and landing grounds, open to civil aviation in the United Kingdom, and Service and Civil stations, available to civil aircraft in case of emergency only, are shown in the lists (A to E) which have been corrected to October 1, 1922.

2. The lists are classified as follows, each aerodrome or landing-ground being given in alphabetical order :—

LIST A.—*Government-owned Aerodromes available for civil flying, at which accommodation exists.*

(*a*) *Civil Aerodromes.* (*b*) *Service Stations.*

LIST B.*—*Aerodromes available for civil machines in emergency only.*

(*a*) *Permanent Service Stations.* (*b*) *Stations temporarily retained for Service purposes.* (*c*) *Civil Stations.*

* N.B.—The Aerodromes in Section (*a*) *Permanent Service Stations* and Section (*b*) *Stations temporarily retained for Service purposes,* except aerodromes which are within a prohibited area (*e.g.*, Gosport), may be used, until further notice, in addition to cases of real emergency :—

(i) For refuelling in the course of journeys where no civil facilities exist.

(ii) For landing of passengers proceeding to a destination near the aerodrome concerned.

No guarantee can be given that any R.A.F. transport will be available, or that the machine can be housed in such cases.

Where possible, notice of intention to use any such aerodrome should be given in advance to the Officer Commanding.

LIST C.—*Licensed Civil Aerodromes*

Civil Aerodromes licensed for all types.

LIST D.—*Unlicensed Private Aerodromes.*

Aerodromes available for civil machines only by special permission of the owners, or in emergency.

LIST E.—*Emergency Landing Grounds*

Unless otherwise indicated, no accommodation for aircraft exists at these stations.

3. *Customs Stations.*—The only aerodromes at which Customs facilities exist at present are *Croydon* and *Lympne.*

4. It should be clearly understood that these lists are purely provisional, and are subject to alteration from time to time. Such amendments are published periodically as "Notices to Airmen."

5. In those cases in which it is stated that accommodation does not exist, no facilities other than the actual landing grounds are available.

6. No guarantee can be given at the present time that personnel to handle aircraft is available either at the Service Stations or at the Civil licensed aerodromes.

7. Notices to Airmen Nos. 35, 45, 52, and 60 of the year 1922 are cancelled.

(No. 107 of 1922.)

AIRISMS FROM THE FOUR WINDS.

WHO asked for the kite-balloons?

* * *

AND who discovered them?

* * *

WHAT the re-transfer "scoop" meant to the aerodrome "all at"-purchaser?

* * *

COMMANDER F. W. M. BOOTHY is as usual practical and to the point in a communication regarding the helpful advantages of the airship in the passing—we hope—Near East complications. Commander Boothby's idea is that:—

"Constantinople could be reached by airship from England in twenty-four hours. One or two of our existing airships now decaying in the hands of the Air Ministry could carry fuel for a flight there and back with a moderate load. It would be feasible to construct airships to carry six aeroplanes in flying order to the Near East and have them on service there in thirty-six hours. If we are packing and dispatching aeroplanes by sea it is doubtful if they can be flying where required in less then three weeks from the order for their dispatch being given. Speed of concentration is everything in war, emphasised specially in air war. Only airships permit of the most rapid concentration where distances of over one thousand miles have to be covered. Sea transport will always be required for heavy guns, stores, etc., but men, aeroplanes, light guns are best transported by airship."

* * *

To be hoped *these* aircraft were not also mixed up in the "all at" price!

* * *

PERHAPS less expensive and equally effective for the purpose, irrespective of its accomplishment, was the natural incident on Sunday of the flight from Croydon to Constantinople of Maj.-Gen. Sir Warren Hastings Anderson, on a D.H. 37 aeroplane, under the unerring guidance of Mr. Alan J. Cobham. The "incident," where noticed at all, was received by way of an ordinary passing event, which is all to the good of the cause. Presently, by air will be "the only way" for most folk.

* * *

M. FOKKER—as the decision stands at present—is to be barred from exhibiting at the Paris Aero Salon in December next. This is but an echo of the absurd action which resulted from Fokker's exhibiting at last year's Paris Salon. It is to be hoped, in the cause of aeronautical progress, there is sufficient independent thought with the Members of the *Chambre des Industries Aéronautiques* to see that their Executive Committee reconsider such a narrow-minded veto.

* * *

BESIDES many ordinary matters of importance coming forward at the next International Commission for Air Navigation on October 20, at Old Palace Yard, Westminster, is one which should receive strong support, viz., the revision of one of the existing articles which at present handicaps the extension of cross-continental routes. At present, Article 5, as it stands, prevents any of the contracting States from allowing aircraft of non-contracting States—including ex-enemy States—flying over their territories. The French delegation will propose an amendment whereby any individual State will be empowered to make direct agreement with any non-contracting State with which it desires to establish flying. A clause of this character, as originally passed, is likely to have the contrary effect to that no doubt intended, to force in any State holding aloof. It is only prejudice that would support such isolation, and there is nothing like practical experience of the advantages occurring from co-operation to bring such obstinacy to heel.

* * *

A PROPOS of that unfortunate contretemps of James's with his maps in the Coupe Deutsch, the French papers have, generally speaking, refused to accept James's explanation. Not a few of them have given other "explanations" of what happened, all of them wide of the mark and quite untrue. It is therefore all the more refreshing to find, among the French Press, one gentleman and one journal, at any rate, who have not lost the courtesy and chivalry with which we have always credited our French Allies. In the October 3 issue of *L'Aero-Sports*, M. Roger Labric, the distinguished *Redacteur en Chef* of that journal, publishes an article which he heads "La Mauvaise Parole." In this he takes exception to statements made in other French papers, notably *Le Journal*.

* * *

WITH regard to the statement, attributed by M. Labric to "Comrade Raffalovitch," of *Le Journal*, that James's thermometer registered 110 degrees after he landed, M. Labric has interviewed M. Lamblin, who informed him that the thermometer never exceeded 70 degrees. He also quotes from *Le Journal* the following: "Besides, a slight fracture appeared on the top plane of his machine, and it is probable that not wishing it to come off in the air, James wisely preferred to land rather than risk a catastrophe." M. Labric's comments upon this statement are forcible and to the point. "How the devil," he says, "could James discover, from his seat, a fracture which did not exist and never did exist except in the imaginative mind of Raffalovitch?"

* * *

"THE foreigners," M. Labric concludes, "take the trouble to come and race here, at great expense, and it is thus that they are received and sympathised with in their misfortune. It is not only a lack of courtesy and of truth, but it is also unsportsmanlike in the highest degree."

* * *

WOULD that there were a few more sportsmen like M. Labric.

* * *

OUR distinguished French confrère then suggests that James be persuaded not to leave France until he has had an opportunity of flying his machine over the measured kilometre course, his times to be taken by the same *chronometreurs* as those who timed Sadi Lecointe. This has now been done, and the average speed attained by James on the Mars I was one kilometre in 10.55 seconds, corresponding to a speed of 341·4 kilometres (211·7 miles) per hour. Sadi's record was of 212·6 m.p.h. Thus the machines are near enough of the same speed.

* * *

CAN anyone give us the address of Liverpool? We want to get at the valuable contributor to one of that city's "newspapers" of the following little perpetration:—

"LONDON–NEW YORK IN A DAY!

AMERICAN AIR COMPANY'S PROJECT.

Possible in Two Years.

The establishment of a Trans-Atlantic air service within the next two years is a possibility.

"According to information which has reached London it is learned that a scheme is already being prepared by an American corporation called "General Air Service" which has powerful financial interests behind it.

"The co-operation that will be required on this side of the Atlantic is sure to be forthcoming, it is stated, so that travellers may look forward to journeying from London to New York and back in about two days.

"Plans are in hand for the organisation of a company to build the airships, the General Air Service being an operating company only. The air lines will be huge ships with a passenger capacity of 100, and will be capable of a maximum speed of 100 miles an hour.

"The airships will be fitted with luxurious quarters attached to the frame of the ship and so arranged that noise, fumes and discomforts of any kind are well nigh impossible. Lounges and smoking-rooms will ensure comfort during the day, and luxurious sleeping quarters will make night travel of the pleasantest nature. The sanitary arrangements will leave nothing to be desired, and an adequate dining service will be provided."

* * *

As motive power is not mentioned probably the forthcoming glider experiments are to form the basis of the whole scheme. Isn't it wonderful? as poor Charlie Bertram, the conjurer, used to say.

FLIGHT

THE WORK OF S. P. LANGLEY

PROFESSOR L. BAIRSTOW, Chairman of the Royal Aeronautical Society, chose the above subject for his first lecture of the season (given on October 5 at the Royal United Service Institute), in order to draw attention to a first-rate example of systematic enquiry, the type of enquiry properly called scientific. "Progress was made," Professor Bairstow said, "step by step in the face of formidable difficulties, and no attempts were made to solve the problems of mechanical flight by bursts of brilliance of the type known as the invention of genius. To my mind this, the scientific method, is most suitable for the great bulk of human endeavour, and we should accept the phenomenal leaps of some individuals as the exception rather than the rule. The influence of Langley lies in the force of example and the spirit of his work rather than in the permanence of his data. It is probably not wide of the mark to say that the experimental results of Langley are now rarely appealed to, since they have been succeeded by others of greater accuracy and more immediate applicability, and yet who can doubt that the whole course of aviation was largely determined by the efforts of this one man. Without him I think it almost certain that flying would not have been ready for the Great War, with consequences which we can imagine."

The lecturer then referred to the "Langley Memoir on Mechanical Flight," published in 1911, in which the first part was written by Langley himself (and covered the period 1887–1896), the second part by Charles M. Manley, Langley's chief assistant (covering the period 1897–1903). "The end of this period," Professor Bairstow said, "is significant, coinciding almost precisely with the earliest successes of the Wright brothers. The record after that date has been marred by the Hammondsport trials on the modified Langley aeroplane. I want you to leave those trials out of your account, for they have nothing to do with Langley and his methods."

Regarding a quotation from Langley ('I have brought to a close the portion of the work which seemed to be specially mine—the demonstration of the practicability of mechanical flight—and for the next stage, which is the commercial and practical development of the idea, it is probable that the world may look to others. The world, indeed, will be supine if it do not realise that a new possibility has come to it, and that the great universal highway overhead is now soon to be opened'), the lecturer said:—

"In that short passage is much of interest; it points out the unknown amount of work involved in a particular piece of research, and that the reward is often in internal satisfaction and not commercial return. To the scientist the financial returns are, I think, rightly, less appreciated than the successful campaign against difficulties, though he must, since he belongs to the animal kingdom, pay such attention to the former as will keep body and mind fit for the task.

"I think Langley might well be satisfied with the help that he has given to others, though he might wish to reiterate his concluding paragraph to a world which has allowed 20 years to lapse without realising the value of the opening of the great universal highway. Possibly, however, he might exhibit some of the patience shown in his experimental work and see sufficiently steady, if slow, progress towards the goal he foresaw."

"It appears," the lecturer said, "that the pursuit of knowledge requires some courage, and Langley impresses one as having been able to recognise home truths with detachment and humour. In one passage he says: 'It has taken me, indeed, but a few years to pass through the period when the observer hears that his alleged observation was a mistake; and the period when he is told that if it were true it would be useless; and the period when he is told that it is undoubtedly true, but that it has always been known.' It sounds like modern history instead of 25 years ago, and I wonder how many cold shivers are passing down our backs at the thought that we may be saying such things ourselves. Of course it is not likely, but then——."

"Throughout his writings," the lecturer continued, "Langley made a clear distinction between two subjects which he called 'aerodynamics' and 'aerodromics,' a distinction which still exists, but is differently described. His divisions correspond very closely with the modern expressions 'performance' and 'control and stability,' both of which are now regarded as branches of aerodynamics. The scientific advisers of the Air Ministry are more and more turning to the study of 'aerodromics,' on which progress towards safety is seen to depend very largely. Its problems are very difficult at the present time, and in the absence of scientific executive direction progress will continue to be slow.

"There is little present evidence of the spirit of Langley, which takes up a task so great that 'to cover it no lifetime would have sufficed.' Team work may be continuous, but the work of an individual is necessarily limited by the length of his active years of life. If, however, the team is to be steady it must be well guided, and we have yet much to learn in the methods of doing this. Would Langley, who saw so clearly the broad future of aviation, or a non-scientific man have been the better director of research?"

The lecturer described the experiments conducted by Langley from the year 1886, his disappointments and successes. He aimed at demonstrating the possibility of mechanical flight, and to him there was no noteworthy distinction between demonstration on a model and on a man-carrying aeroplane. In May and November, 1896, flights were made with model aeroplanes fitted with a steam engine that produced 1 h.p. to 1½ h.p. and weighed a little over 5 lbs. No pilot was carried. The machines were launched from a track over water. In the first flight the distance traversed was a little over 3,000 ft., at a rate of from 20 to 25 m.p.h.

The lecturer then showed slides illustrating the Langley man-carrying machine, and gave some particulars of weights, areas, etc., as well as making reference to the unsuccessful attempts at free flight with the full-size machine.

"The end of Langley's work," said the lecturer, "did not come from lack of spirit, for he considered it desirable to continue the experiments, but the adverse opinions expressed in Congress and elsewhere led to the suspension of operations. Later on, in 1904, 'it was found that while a number of men of means were willing to assist in the development of the aeroplane, provided arrangements were made for later commercialisation, none were ready to render the assistance from a desire to assist in the prosecution of scientific work.'"

In conclusion Professor Bairstow said:—

"Is not this sketch rather an indication that Boards—including Air Ministeries—cannot utilise the enthusiasm of scientists under their control? What is wrong? Is it the Air Ministry or the scientist, or both? Can an administrator who has no scientific knowledge direct the work of scientists? Has B itain ever allowed a fair trial to the executive control of scientific work by a man of science? How often have men of science been placed on advisory bodies and their advice ignored? I am not going to answer my own questions; in one aspect the ground is political, and concerns our system of government, but in another it is a proper subject for the concern of a scientific and technical body like the Royal Aeronautical Society.

"I have made my lecture rather long without covering the many interesting points in Langley's work in more than a sketchy manner. His speculations on soaring are worth the attention of any serious investigator who is trying to account for the phenomenal success of gliders. I may not stay to deal with the subject now, for the digression, to be worth while, would be long."

ROYAL AERONAUTICAL SOCIETY NOTICES

Forthcoming Arrangements.—October 19, 5.30 p.m., Royal United Service Institution, Mr. J. D. North, "The Metal Construction of Aeroplanes."

Owing to the continuance of rebuilding operations of the Royal Society of Arts, Major A. R. Low's lecture, "A Review of Airscrew and Helicopter Theory, with Aeroplane Analogies," will take place at the Royal United Service Institution, Whitehall, S.W. 1, at 5.30 p.m., on Thursday, November 2.

Members are reminded that they do not require tickets for lectures, and that the only announcement of them is contained in the official notices to the press, and in the preliminary notices in the *Aeronautical Journal*.

The October number of the *Aeronautical Journal* contains the following: Wilbur Wright Lecture; "Some Aspects of Aeronautical Research," by Lieut.-Col. A. Ogilvie; "Helicopters," by John Case; "Stability Calculations in the Process of Design," by J. D. North; "Gas Armour," by F. L. M. Boothby.

W. LOCKWOOD MARSH,
Secretary

THE ROYAL AIR FORCE

[*War Office.*]

London Gazette, October 3, 1922.

General List

Sir J. M. Salmond, K.C.B., C.M.G., C.V.O., D.S.O. (Air Vice-Marshal, R.A.F.), to be temp. Maj.-Gen. whilst comdg. the Forces in Iraq ; Oct. 1.

[*Air Ministry.*]

London Gazette, October 3, 1922.

General Duties Branch

The following are granted short service commissions as Flying Officers, with effect from, and seniority of, dates indicated :—C. R. Carr ; Sept. 19. I. Glyn-Roberts ; Sept. 22. W. H. Stiles ; Sept. 25. D. C. Balfour is granted a short service commission as Flight Lieut. for three years on active list, with effect from, and seniority of, Oct. 1. G. A. Kysh is granted short service commission as Flying Officer for three years on active list, with seniority of April 1, 1918 ; Oct. 1.

The following are restored to full pay from half-pay :—Air Commodore E. A. D. Masterman, C.M.G., C.B.E., A.F.C. ; Oct. 2. Wing Comdr. G. P. Grenfell, D.S.O. ; Sept. 14.

Flt. Lt. F. J. Hooper is placed on the Retired List ; Oct. 3. Flg. Off. W. B. Higgins resigns his short service commission ; Sept. 13. Flg. Off. R. S. Maitland-Edwards relinquishes his short service commission on account of ill-health, and is permitted to retain rank of Lieut. ; Oct. 4. Pilot Off. E. F. Kohler relinquishes his short service commission on account of ill-health contracted in the Service ; Sept. 7.

Stores Branch

Flg. Off. L. G. Stevenson is placed on Retired List on account of ill-health contracted on active service ; Oct. 4.

Medical Branch

Capt. J. J. Boyle, Army Dental Corps, is granted temporary commission as Flight Lieut. on atachment for four years' duty with R.A.F. ; Oct. 1. He will continue to receive emoluments from Army funds.

Nursing Service

Miss M. McGlynn is confirmed in her appointment as Staff Nurse ; March 1.

Memoranda

Lieut. H. Balls relinquishes his temporary commission on ceasing to be employed, and is permitted to retain his rank ; Sept. 19.

ROYAL AIR FORCE INTELLIGENCE

Appointments.—The following appointments in the Royal Air Force are notified: —

Group Captains : Hon. J. D. Boyle, C.B.E., D.S.O., from No. 7 Group Headquarters (Inland Area) to Headquarters, R.A.F., Iraq (Supernumerary). 14.9.22.

Wing Commanders : W. H. Primrose, D.F.C., from School of Technical Training (Men) (Armoured Car Details) (Inland Area) to Headquarters, R.A.F., Iraq (Supernumerary.) 14.9.22. G. P. Grenfell, D.S.O., from Half-pay List to Air Ministry (C. of C.). 14.9.22. D. L. Allen, A.F.C., from Half-pay List to R.A.F. Depôt (Inland Area). (Supernumerary.) 20.9.22. W. Tyrrell, D.S.O., M.C., M.B., from Research Laboratory and Medical Officers' School of Instruction (Coastal Area) to Basrah Hospital, Iraq, for duty as O.C. 14.9.22. B. A. Playne, D.S.O., M.B., B.A., from Headquarters Inland Area to command Baghdad Combined Hospital (Iraq). 14.9.22. C. T. Maclean, D.S.O., M.C., from Headquarters, Inland Area, to Headquarters, R.A.F., India. 19.9.22.

Squadron Leaders : A. Levick, O.B.E., to Headquarters, Inland Area, to Headquarters, R.A.F., Iraq. 14.9.22. W. V. Strugnell, M.C., from R.A.F. Depôt (Inland Area) to Aircraft Depôt (Iraq). 14.9.22. W. G. Sitwell, D.S.C., from Electrical and Wireless School (Inland Area) to Headquarters, R.A.F., Iraq. 14.9.22. F. G. D. Hards, D.S.C., D.F.C., from R.A.F. Depôt (Inland Area) to Headquarters, R.A.F., Iraq (Supernumerary). 14.9.22. F. H. W. Guard, C.M.G., D.S.O., from School of Technical Training (Men) (Armoured Car Details) (Inland Area) to Headquarters, R.A.F., Iraq (Supernumerary). 14.9.22. A. J. Butler, M.C., A.F.C., from R.A.F. Depôt (Inland Area) to Headquarters, R.A.F., Iraq. 14.9.22. J. A. Stone, from Headquarters, Inland Area, to Headquarters, R.A.F., Iraq (Supernumerary) 14.9.22. R. P. Willock, from School of Technical Training (Men) (Armoured Car Details) (Inland Area) to Headquarters Iraq (Supernumerary). 14.9.22. R. L. G. Marix, D.S.O., from R.A.F. Depôt (Inland Area) to Electrical and Wireless School (Inland Area) (Supernumerary). 25.9.22. W. W. Shorten, F.R.C.S. (E.), from Headquarters, Inland Area, to Baghdad Combined Hospital (Iraq). 14.9.22. H. A. Hewat, M.B., from R.A.F. Hospital, Cranwell, to R.A.F. Depot (Inland Area) (Supernumerary). 23.9.22. R. A. G. Elliott, M.B., B.A., from Headquarters (Coastal Area) to Headquarters, R.A.F., Middle East (Supernumerary). 16.9.22. J. Kemper, M.B.E., from Aircraft Depot, Egypt (Middle East) to No. 4 Flying Training School (Middle East). 18.7.22. A. G. Higgins, from Research Laboratory and Medical Officers' School of Instruction (Coastal Area) to School of Technical Training (Men) (Inland Area). 27.9.22. R. Leckie, D.S.O., D.S.C., D.F.C., from No. 1 School of Technical Training (Boys) (Halton) to R.A.F. Depot (Inland Area) (Supernumerary). 25.9.22.

Flight Lieutenants : J. M. Robb, D.F.C., from No. 24 Squadron (Inland Area) to No. 6 Squadron (Iraq). 14.9.22. R. S. Aitken, M.C., A.F.C., from Electrical and Wireless School (Inland Area) to Headquarters, R.A.F., Iraq. 14.9.22. H. M. K. Brown, from School of Technical Training (Men) (Armoured Car Details) (Inland Area) to Headquarters, R.A.F., Iraq. (Supernumerary). 14.9.22. E. P. Roberts, M.C., D.C.M., from Headquarters (Coastal Area) to No. 6 Squadron (Iraq). 14.9.22. F. L. C. Butcher, from Electrical and Wireless School (Inland Area) to Headquarters, R.A.F., Iraq. (Supernumerary.) 14.9.22. N. H. Jenkins, D.F.C., D.S.M., from No. 24 Squadron (Inland Area) to No. 84 Squadron (Iraq). 14.9.22. C. E. Wardle, from School of Technical Training (Men) (Armoured Car Details) (Inland Area) to Headquarters, R.A.F., Iraq. (Supernumerary.) 14.9.22. G. F. P. Warren, from School of Technical Training (Men) (Armoured Car Details) (Inland Area) to Headquarters, R.A.F., Iraq. (Supernumerary.) 14.9.22. H. O. Fellowes, from Headquarters, Inland Area, to Headquarters, R.A.F., Iraq. 14.9.22. H. V. Drew, A.F.C., from No. 10 Group, Headquarters (Coastal Area) to Headquarters, R.A.F., Iraq. (Supernumerary.) 14.9.22. W. H. Ellison, from No. 1 School of Technical Training (Boys) (Halton) to Aircraft Depôt (Iraq). (Supernumerary.) 14.9.22. A. E. Sutton-Jones, from R.A.F. Base, Gosport (Coastal Area) to Headquarters, R.A.F., Iraq. (Supernumerary.) 14.9.22. A. H. Comfort, from R.A.F. Depôt, (Inland Area) to Stores Depôt (Iraq). 14.9.22. (Act. Sq. Ldr.) F. Binns, M.B.E., from R.A.F. Depôt (Inland Area) to Headquarters, R.A.F., Iraq. (Supernumerary.) 14.9.22. W. J. de Salis, D.S.C., from Marine and Armament Experimental Establishment (Coastal Area) to Half-pay List. 28.9.22. W. K. Mercer, from R.A.F. Depôt (Inland Area) to R.A.F. Base, Leuchars (Coastal Area). 1.10.22. A. R. Thomas, from Instrument Design Establishment (Inland Area) to No. 5 Flying Training School (Inland Area). 2.10.22. P. J. Flood, from School of Technical Training (Men) (Inland Area) to Headquarters, R.A.F., Iraq. (Supernumerary.) 14.9.22. H. B. Troup, from No. 1 School of Technical Training (Boys) (Halton Hospital) (Halton) to Headquarters, R.A.F., Iraq. (Supernumerary.) 14.9.22. D. Le Bas, from R.A.F. Depôt (Inland Area) to Headquarters, R.A.F., Iraq. (Supernumerary.) 14.9.22.

HONOURS

Awards to the R.A.F. in Iraq

THE King has given orders for the following promotions in and appointments to the Most Excellent Order of the British Empire, in recognition of distinguished services in Iraq during 1921. To be dated February 1, 1922 :—

C.B.E. (Military Division).—Wing Commander W. F. MacNeece, D.S.O., D.F.C., R.A.F.

O.B.E. (Military Division).—Flight Lieut. F. Petch, M.B.E., R.A.F. ; Flight Lieut. C. H. Tancred, M.B.E., R.A.F.

M.B.E. (Military Division).—Flying Officer J. M. Wyer, D.S.M., R.A.F. ; Flight Lieut. A. P. Ledger, R.A.F. ; Flight Lieut. E. C. W. Fitzherbert, D.S.C., R.A.F. ; Flying Officer J. W. Hustwaite, R.A.F.

The King has approved of the following rewards for distinguished services rendered during active service operations in Iraq during 1920-21 :—

Bar to D.F.C.—Flight Lieut. C. B. S. Spackman, D.F.C. ; Flight Officer E. Brewerton, D.F.C.

D.F.C.—Sqdn. Ldr. W. Sowrey, A.F.C. ; Flight Lieut. M. Thomas, A.F.C. ; Flight Lieut. H. S. P. Walmsley, M.C. ; Flying Officer F. K. Damant.

Distinguished Flying Medal.—244308 A.C. 1 T. G. Banks, 47558 Flight Sgt. J. Birch, 39018 A.C. 1 R. Hayne, 89300 A.C. 1 P. A. Hughes, 336589 L.A.C. S. L. Palmer.

Meritorious Service Medal.—401649 Sgt. S. W. Blight, 17396 Sgt. A. V. Brooker, 19797 Sgt. A. Figg, 329321 L.A.C. (actg. Cpl.) F. Garrod, 313813 Flight Sgt. W. P. Luscombe, 148401 Sgt.-Maj. C. F. Mountifield, 314819 Flight Sgt. H. A. C. Oland, 8293 Cpl. G. E. Taverner.

The following officers and airmen of the Royal Air Force have been mentioned in dispatches for distinguished service rendered during active operations in Iraq during 1920-21 :—

Flying Officer C. W. Booth, M.B.E. ; Sqdn. Ldr. R. Collishaw, D.S.O., O.B.E., D.S.C., D.F.C. ; Flying Officer F. J. Fogarty ; Sqdn. Ldr. V. Gaskell-Blackburn, D.S.C., A.F.C. ; Flying Officer G. A. Gowler ; Flight Lieut. O. G. Gregson ; Flight Lieut. C. W. Mackey ; Sqdn. Ldr. R. S. Maxwell, M.C., D.F.C. ; Wing Commander V. O. Rees, O.B.E. ; Sqdn. Ldr. E. A. B. Rice, M.C.

149455 Cpl. C. E. Andrews, 308977 L.A.C. (actg. Cpl.) J. R. Briggs, 864 Flight Sgt. C. F. R. Bunting, 331411 L.A.C. F. Carter, 340506 Cpl. W. T. Eberwein, 6071 Cpl. (actg. Sgt.) A. C. Elmy, 157606 A.C. 1 W. H. Harrison, 204601 Cpl. W. R. Henderson, 780 Sgt. G. W. Hepple, 252623 L.A.C. N. Hetherington, 156440 A.C. 1 B. J. Jennings, 157884 Cpl. I. Mackintosh, 89812 A.C. 1 R. J. Meads, 1349 Cpl. (actg. Sgt.) S. C. Murton, 332458 A.C. 1 G. O. Pitcher, 301859 Sgt. H. Thompson.

The King has been graciously pleased to approve of the following rewards for distinguished services during active service operations in Somaliland in March, 1922 :—

D.F.C.—Sqdn. Ldr. A. S. C. Maclaren, O.B.E., M.C., A.F.C.

Distinguished Flying Medal.—81,000 Leading Aircraftsman J. A. Bridgman.

Mentions in Dispatches.—Flying Officer G. S. Smith.

The following officer of the Royal Air Force has been mentioned in dispatches for distinguished services during active service operations in the Hinterland of Aden in February, 1922 :—

Flying Officer W. N. Plenderleith.

FLIGHT

SOCIETY OF MODEL AERONAUTICAL ENGINEERS

(London Aero-Models Association)

AT an Extraordinary Meeting of the Society, held at Headquarters on Friday last, Dr. Thurston in the Chair, the Hon. Secretary, Mr. A. E. Jones, gave a synopsis of the work accomplished during the first year of the Society's existence. He said he thought that after hearing the auditors' report it would be agreed that it is very creditable from a financial point of view that this infant Society is so strong and vigorous, and also very creditable that the Society should emerge with a balance in hand of over £15. It must not be overlooked that the assets are greatly increased by the following :—

1, The "Sir John Shelley" Cup; 2, the "Lady Shelley" Cup; 3, the Kite and Model Aeroplane Association Cup; 4, the "Model Engineer" Cup; 5, the "Weston" Cup; 6, the "Flight" Cup; 7, the "Felix Kelly" Cup; 8, the "W. E. Evans" Cup; 9, the "D. H. Pilcher" Cup; 10, the "Farrow" Shield; the minimum value amounting to over £120—in addition to apparatus, value over £20.

There was, he continued, a likelihood of further cups being presented, but he thought they were most fortunate in having these valuable assets, and thanks are due to the gentlemen who have been instrumental in procuring same for them, and also to the donors for their great kindness and generosity.

He said he would also like to make special mention of the fact that since October, 1921, cups and cash prizes to the total value of £14 11s. have been won outright, thanks to the generosity of the following gentlemen : Mr. Best, Messrs. W. G. Evans and Sons, Mr. L. A. Gray, Mr. C. J. Lane, Mr. J. Louch, Mr. F. de P. Green, Mr. D. A. Pavely, Mr. A. Wilson and others. There is also a prize of £3 3s. offered for an ornithopter competition, thanks again to Mr. D. A. Pavely.

The Society has also received valuable support from the *Model Engineer* and FLIGHT, not only in the way of cups, but in valuable space kindly given in their columns week after week, which if the Society had to pay for would amount to a very considerable item of expenditure. He hoped their kindness would be rewarded with a larger clientèle anxious to benefit by the good work of the members and especially the Research Committee of the Society.

He added they must not forget what the *Model Engineer* did for them in another direction; they allotted space for Society exhibits at their exhibition at a very nominal fee, and further encouraged the members by presenting one silver and five bronze medals in addition to numerous certificates.

There is another very important and valuable privilege which the Society enjoys—that of having Headquarters provided free of charge; and thanks are due to Mr. Rees for this great benefit, which if put at a nominal charge of 10s. 6d. per meeting would mean an expenditure of over £26 per annum.

They were also greatly indebted to Mr. and Mrs. Graves for the splendid way they have looked after the requirements of the Society. He thought they would agree with him that this alone was wonderful value for their money, but greater benefits had accrued in another direction. They had obtained official permission to fly on the L.C.C. open spaces. They have had lectures from Dr. Hankin, Mr. Reynolds (of Messrs. Handley Page), Mr. W. E. Evans, and Mr. F. J. Camm. They have also had the opportunity of taking part in or listening to debates as follows :—"The Construction of Model Aeroplane Wings," Mr. Burchell; "Fusilage Models," Mr. W. E. Evans; "Model Propeller Making," Mr. W. E. Evans; "The Burk Propeller," Mr. F. de P. Green; "Geared Motors," Mr. F. J. Camm; "Compressed Air Motors," Mr. Rippon; "Construction of Containers," Mr. J. E. Louch; "Ornithopters," Mr. D. A. Pavely.

The following competitions have been arranged :—

1st, Parliament Hill Fields; 2nd, Wormwood Scrubbs; 3rd, Wormwood Scrubbs; 4th, Wimbledon Common; 5th, Hackney Marshes; 6th, Wimbledon Common; 7th, Handley Page Grounds; 8th, Wimbledon Common.

The Competition Secretary will be pleased to give particulars of these Competitions if required.

Special flying demonstrations have been given at Hampstead, Blackheath, Wanstead Flats, and Wimbledon Common. Special meetings were held for record breaking at Wanstead Flats, Wimbledon Common, and Hampstead Heath.

They have had the following records put up, or, in other words, British records broken :—(1) Mr. D. A. Pavely, compressed air driven model at Wimbledon Common, 63⅖ secs., timed by Mr. F. de P. Green and Mr. C. A. Rippon. (2) Mr. L. A. Gray, enclosed rubber driven model, hand launched, at Wanstead Flats, 37 secs. (3) Mr. L. A. Gray, enclosed rubber driven model R.O.G., 26 secs. (4) Mr. C. Hersom, twin pusher R.O.G., at Wanstead Flats, 247 secs. (5) Mr. C. Hersom, single tractor waterplane, at Wanstead Flats, 43 secs. (6) Mr. H. J. Davis, gliding record, 41⅗ secs.

These records were timed by Mr. Houlberg and Mr. Rippon, and accepted by the Committee.

On behalf of the Society the Technical Secretary has written interesting articles in the Press, for which they (the Society) are greatly indebted to him.

A film was taken of the Competition held at Wormwood Scrubbs, a copy of which the Secretary said was in his possession. They were most fortunate in having Messrs. Pathé Frères as official cinematographers to the Society.

Three most excellent concerts were given, for which the thanks of the Society are due to Mr. J. Louch.

Mr. Houlberg has designed an excellent certificate, a copy of which will be given to any member putting up a meritorious performance.

The prize winners are as follows :—Messrs. L. A. Gray, W. E. Evans, L. Lansdown, C. A. Rippon, A. Whelpton, D. A. Pavely, M. Levy, C. J. Burchell, F. de P. Green, G. A. Brown, L. G. H. Hatfull, H. H. Bedford and C. Hersom.

The membership of the Society has increased from 10 to 80 during the past twelve months. Amongst the members enrolled are two Doctors of Science; this, he thought, augurs well for the future of the Society. Many members have been enrolled who will be particularly useful in research work, and he had no doubt that it will be seen that they are elected to the Research Committee, who will be only too pleased to welcome them in the strenuous work that lies before that body.

Suggestions from several quarters have been made that there should be two official observers on each ground instead of one, as at present. Another suggestion is that a Correspondence Circle be formed for the benefit of country members.

The Committee are desirous of making up a programme for the winter session, and this, it is hoped, will be ready in the course of a week or so.

A. E. Jones, Hon. Sec., 48, Narcissus Road, West Hampstead, N.W. 6.

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PERSONALS

Married

Major HERBERT GEORGE BRACKLEY, D.S.O., D.F.C., was married on September 27, at All Saints' Church, Margaret Street, W., to Miss FRIDA MOND, elder daughter of Mr. Robert Mond, J.P., of Combe Bank, Sevenoaks, and 50, Wimpole Street, and niece of Sir Alfred Mond. Miss Mond was given away by her father, and Major Eric Ince was best man.

PHILIP VICTOR CHABOT LOW, late Lieut., Black Watch and R.A.F., third son of Mr. and Mrs. Alexander G. Low, of 9, Holland Park, W. 11, was married on September 30, at Durban, South Africa, to ALISON, fourth daughter of the late CHARLES LOGAN and Mrs. Logan, of 21, Lothian Street, Hawick.

To be Married

The engagement is announced between JOHN ARCHIBALD REDVERS BULLER, late K.R.R.C. and R.A.F., son of the late Rev. E. H. Buller and of Mrs. Seymour, of Roche de Lion, Gorey, Jersey, and MARJORIE, daughter of the late HENRY WARD-PRICE and of Mrs. Ward-Price, of 14, Hanover Square, W.

The engagement is announced between ROYDON DASH, D.F.C., only son of R. Ashford Dash, of 6, Berrylands, Surbiton Hill, and CHRISTINE (CHRISSA), third daughter of F. G. TYRRELL, of Westholme, Laton Road, Hastings, Sussex.

The engagement is announced between Flight-Lieut. THOMAS HENDERSON, R.A.F., eldest son of Mrs. H. Henderson, of Tynemouth, Northumberland, and EDITH LESLIE, daughter of Mrs. ALEXANDER DEUCHAR, lately of The Minories, Newcastle.

The marriage of Wing-Commander W. G. WELSH, R.A.F., and RUTH EDRIDGE DALZELL will take place next Monday at St. George's, Hanover Square.

RUBBER AS APPLIED TO AIRCRAFT

MR. J. W. DYER, M.Sc., A.I.C., delivered an interesting lecture, under the above title, on October 2 before the Engineers' Club, and we give below a *résumé* of his remarks on this important subject.

The author summarised the uses of rubber under the following headings :—

(1) To form the gas-holding layer and the outer protective layer for the envelopes of kite balloons, non-rigid and semi-rigid airships ; (2) in the gas-bags of rigid airships to form the adhesive by which gold-beaters' skin is stuck to the cotton fabric, which is the base ; (3) in shock-absorber cord for heavier-than-air craft ; (4) in petrol hose ; (5) for tyres on the wheels of aeroplanes ; (6) in many electrical insulating materials generally.

" In a general way," said Mr. Dyer, " it can, I suppose, be said that any material used for any constructional purpose whatsoever is open to supersession by a better and cheaper. The aeroplane designer, so I am given to understand, scorns delights and lives laborious days to come by some other methods of absorbing the shock of landing than the use of rubber cord and some other material for his fuel-supply pipes than rubbered hose.

" Although there are complaints of failure and attempts to replace it by alternative gear, it is difficult to get satisfactory explanations of the causes of failure.

" It is the exception rather than the rule to have failed materials returned from service for examination accompanied by a full account of the circumstances that led to failure."

Dealing with the lighter-than-air side, the author stated that the main use of rubber is as a constituent of the proofed fabrics of which the envelopes are made, and in this field, if and when any of these craft are required, rubber is without a present rival.

Every improvement in the endurance of the proofing calls for renewed attention to the textile component. For this, as for the rubber, light is the dangerous agent. A good deal of work arising out of the problems of aircraft fabrics has been published on this point. The precise mode of action may not be clear, but it can be accepted that light, air and the cellulose of the textile form an unstable trio, and the practical result is the tendering of the textile.

It seems possible that through tests the following points might be investigated :—

(1) The minimum weight of gas-holding layer for good robustness.

(2) The effect with the thinner gas-holding layers of a little and a good deal, say 10 per cent., of mineral addition such as litharge, as compared with pure rubber sulphur.

(3) Whether degree of cure is of any importance.

If rigid airship construction is actively resumed, there is no doubt that attempts to find an actual substitute for gold-beater's skin will be made. Whether a rubber-proofed fabric could be made to meet both weight and permeability requirements is at present somewhat doubtful.

It may be asked whether rubber can be used as proofing material for the fabric outer cover of rigid airships. Present practice rules out entirely the possibility of using rubber, because the proofing material, a cellulose nitrate or acetate dope with various additions, is applied *in situ*, and is relied upon to produce nearly all the tautness, which it does by its contraction on drying.

In the early days we tried rubber-proofed outer covers, not in actual service, but only experimentally ; the work was abandoned when the prime importance of tautness was recognised, and the apparent impossibility of getting it in any other way than by a contracting dope.

Air Parcel Post Fees

THE Postmaster-General announces that it has become necessary to increase the fees payable on parcels weighing over 5 lbs. posted for transmission by the semi-official parcel service to Paris which is carried on in conjunction with Messrs. Handley Page's aeroplane service. The new scale of fees took effect on Thursday, October 5, and is as follows :— For parcels weighing up to 2 lbs. 1*s*. 9*d*. ; 2 to 5 lbs., 3*s*. ; 5 to 8 lbs., 4*s*. 6*d*. ; 8 to 11 lbs., 6*s*.

A Fire at Martlesham

A FIRE broke out at Martlesham experimental aerodrome early on Thursday morning of last week, and one of the smaller buildings, which contained two German aeroplanes and one amphibian, was destroyed. The Woodbridge Fire Brigade and men of the camp made a splendid effort to save the adjoining buildings, but of the actual building which caught fire nothing but tangled girders remained. The cause of the fire is at present unknown.

PUBLICATIONS RECEIVED

The Buff Book Trade and Professional Directory for London, October, 1922. The Business Telephone Directories, Ltd., 25, Lawrence Lane, Cheapside, E.C. Price 2*s*. 6*d*. ; by post, 3*s*. 6*d*.

The Royal Air Force Cadet College Magazine, Vol. II, *No.* 2. *Autumn*, 1922. Gale and Polden, Ltd., Wellington Works, Aldershot. Price 3*s*. 6*d*.

Aluminium Repairing. By William H. H. Platt. *Lockwood's Technical Manuals*. London : Crosby Lockwood and Sons. Price 3*s*. net.

Aeronautical Research Committee. Reports and Memoranda. —*No.* 786 (*Ae.* 43), *An Aerodynamic Theory of the Airscrew*. By H. Glauert. January, 1922. Price 9*d*. net, post free 10*d*. *No.* 788 (*Ae.* 45), *Theoretical Streamlines round a Joukowsky Aerofoil*. By M. Barker, B.Sc. December, 1921. Price 3*d*. net, post free 3½*d*. London : H.M. Stationery Office, Kingsway, W.C. 2.

Report for the Year 1921–22 *by the Director of the Royal Scottish Museum, Edinburgh*. London : H.M. Stationery Office, Kingsway, W.C. 2. Price 6*d*. net.

Reports of the Light Alloys Sub-Committee, 1921. *Advisory Committee for Aeronautics*. H.M. Stationery Office, Kingsway, London, W.C. 2. Price 18*s*. 6*d*. net, post free.

Catalogue

Technical and Scientific Books, Second-hand and New. W. and G. Foyle, Ltd., 121-125, Charing Cross Road, London, W.C. 2.

AERONAUTICAL PATENT SPECIFICATIONS

Abbreviations : **cyl. = cylinder ; I.C. = internal combustion ; m. = motor.**

The numbers in brackets are those under which the Specifications will be printed and abridged, etc.

APPLIED FOR IN 1921

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9,847. LUFTSCHIFFBAU ZEPPELIN GES. and P. JARAY. Fins and keels for airships. (161,179.)
9,944. E. A. PERRIN. Aeronautical machines of helicopter type. (162,275.)
9,961. N. TESLA. Aerial transportation apparatus. (185,446.)
15,301 E. B. VAUGHAN. Wind motors, propellers, etc. (185, .)
15,622. Y. P. G. LE PRIEUR. Apparatus for correcting the course on board of aircraft. (164,343.)
25,951. Landing indicators for helicopters. (169,720.)
27,425. M. L. V. LAME. Aircraft of helicopter type. (185,661.)

Published October 12, 1922

15,847. FAIREY AVIATION CO., LTD., and C. R. FAIREY. Ships for use with aeronautical machines. (185,821.)
16,356. P. SALMON. Operating means for aircraft controls. (185,849.)
16,357. J. M. NORMAN. Means for operating aircraft controls. (185,850.)
16,506. Y. P. G. LE PRIEUR. Apparatus for correcting course on board of aeroplanes. (166,119.)
29,982. H. O. SHORT. Aeroplane flying-machines. (185,992.)
31,104. RAUL, MARQUIS OF PATERAS PESCARA. Flying-machines of the helicopter type. (171,712.)

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